

Date September 13, 2018
To Town of Cumberland Planning Board
From Carla Nixon, Town Planner
Subject **Major Site Review: Library Parking Expansion**

REQUEST/PROJECT DESCRIPTION:

The applicant is the Town of Cumberland. Charlie Burnham, P.E. prepared the site plan application. The Town is proposing to expand the current parking lot at the Prince Memorial Library by adding 11 parking spaces for a total 49 spaces. The parcel is located at 266 Maine St in Cumberland Center as shown on Tax Assessor Map U-10, Lot 17.

DEPARTMENT HEAD REVIEWS:

William Longley, Code Enforcement Officer: No comments
Charles Rumsey, Police Chief: No comments
Dan Small, Fire Chief: No comments

LANDS AND CONSERVATION COMMISSION REVIEW: No comments

WAIVER REQUESTS: None, but see Town Engineer's comments.

PEER REVIEW ENGINEER'S COMMENTS: Al Palmer, P.E., Gorrill Palmer Engineers

Below is the review from the Town Engineer and the responses from the design engineer. The Town Engineer has now signed off on all concerns.

Carla,

The following is the response to the comments provided this morning from the peer review. The major changes centered around the spillway. Instead of using riprap an erosion control blanket is proposed, and it has been lowered several inches to provide additional freeboard, and separation from ponding water and the edge of parking. A revised Site Plan has been included as well. **If you have any more questions please don't hesitate to call.**

Thanks,
Charlie Burnham

Site Plan Review Application

1. It does not appear that any landscaping is proposed. Is this acceptable to the Board?

A waiver is being requested regarding any proposed landscaping. The area is currently lawn and the undisturbed area will remain lawn.

2. It does not appear that any lighting is proposed. Is this acceptable to the Board, in particular with respect to winter months?

A waiver is being requested for lighting.

3. With respect to the Stormwater Analysis, we offer the following comments:
- a. The Stage Storage calculations for the detention basin includes a surface area of 150 square feet at elevation 61. It did not appear that **the 61' contour was shown on the Site Plan.**

A 161' contour has been added to the plan.

- b. Is the Designer comfortable that a broad-crested rectangular weir will accurately represent a riprap spillway from a stage-discharge standpoint?

The outlet has been changed to a sharp crested weir.

- c. **The calculations indicate a 5' long x 1' breadth weir, while the Site Plan indicates a 2' x 6' riprap spillway.** Please confirm desired sizing.

The riprap refers to the area being riprapped. The dimensions of the outlet in the model have been adjusted to a sharp crested weir 2' wide.

- d. **The top of the detention basin berm appears to be at elevation 63', is graded to a "point" and has no width to** the top of the berm. We would **recommend that the Designer consider having a 4' wide berm at the top** of the detention basin.

The outlet to the pond is nearly at existing grade. The pond will be mostly cut, and the top of the berm will be a small earthen hump. The width of the berm will be depended on how much space the contractor feels is needed for compaction.

Additionally, the minimal flows and height of the berm would make 4' unnecessary. One of the design intentions was to minimize the footprint of the project and not impact the tree line. As the model shows the required detention is barely achieved, making each foot of storage space precious.

- e. As currently modeled, the water surface elevation in the basin for the **25 year storm is elevation 162.98'. This provides 0.02' of freeboard to** the top of the berm. We would recommend that the Designer consider **providing a minimum of 1' of freeboard from the 25 year storm water** surface elevation to the top of berm.

The outlet elevation has been dropped to provide **6" of freeboard during a 25-year** storm. This freeboard is sufficient for 1.61 cfs of flow. It would be acceptable for the berm to function as a level spreader and be over topped if necessary.

- f. As currently modeled, the ponded water for the 25 year storm is within **approximately 1' of the edge (horizontal) of the expanded parking lot.** Is this desirable?

By lowering the outlet elevation, there is nearly 3' from the ponded water to edge of the parking lot.

- g. As currently designed, the only manner for stormwater discharge **between elevation 161' (bottom of basin) and 162.75' (spillway** elevation) is by surface infiltration. We would recommend that the Designer consider an alternate discharge method (such as an infiltration trench or a low flow piped discharge at elevation 161) in the event of frozen ground or other factor that may limit surface infiltration. This could avoid an extended period of ponded water in the basin after a storm.

In order to daylight a **pipe in the bottom of a trench with a top at 161'** would require running the pipe outside the tree line and towards the abutters. This would create a concentrated flow (even with a level spreader) that may negatively impact the abutting property. The infiltration rate used was the most conservative for the soils on site. Lowering the outlet also helps alleviate this concern.

- h. It appears that the spillway is located in a filled area. We would recommend that the Designer consider relocating the discharge to a cut area, or provide a compaction standard for the berm.

The proposed spillway has been dropped to existing grade (or very near).

- Site Plan

- 1. Site Plan

- a. Neither the Survey nor the Site Plan depict any barrier free parking spaces. We recommend that the Designer evaluate and confirm compliance with the American with Disabilities Act (ADA) relative to parking and access routes.

There are five (5) handicap accessible parking spaces. Three at the entrance to the library and two in the lower lot. Which is sufficient for the 59 total proposed parking spaces according to the 2010 ADA standards which requires 3 spaces for up to 75 parking spaces.

- b. What horizontal control will be provided to assist the Contractor with the layout of the parking lot?

The contractor will need to establish control based on the existing survey.

- c. We would recommend that the Designer consider addition of spot grades at all corners of the parking lot.

Spot grades have been added at each corner and along the edge of the proposed parking lot.

- d. We would recommend that the turnaround area be dimensioned.

Dimensions for the turnaround have been added.

- e. As the Property Line is not shown on the Site Plan, we would **recommend addition of a note that states “Parking lot expansion shall be a minimum of 15’ from property line” to comply with Section 10.2.4.2 of the Site Plan Review Ordinance.**

The suggested note has been added to the Site Plan.

- f. We would recommend that the proposed clearing limits be shown on the Site Plan.

No clearing is proposed.

- g. The proposed driveway cross slope at the westerly end of the parking lot is approximately 4.5%. Is this desirable?

The spot grades should help clarify the slopes. The turnaround has the steepest slopes as the proposed grading ties into existing and is 3.75%. The parking areas are all closer to 2%.

- h. Typical riprap depth is 2.25 times the D50 diameter versus the 1.5 times provided in the detail.

The riprap has been removed in favor of an erosion control blanket. The flows are less than 2 cfs and the downstream slope is less than 2%.

- i. We would recommend that the Designer provide a cross section through the riprap spillway to aid the Contractor in construction.

A cross section has been provided for the spillway.

- j. Based on the stormwater modeling, the principal spillway is not activated until ponded stormwater reaches elevation 162.75'. How will this be accomplished if riprap is used at the base of the spillway?

The riprap has been replaced with an erosion control blanket.

Chapter 229 – SITE PLAN REVIEW

SECTION 10: APPROVAL STANDARDS AND CRITERIA

The following criteria shall be used by the Planning Board in reviewing applications for site plan review and shall serve as minimum requirements for approval of the application. The application shall be approved unless the Planning Board determines that the applicant has failed to meet one or more of these standards. In all instances, the burden of proof shall be on the applicant who must produce evidence sufficient to warrant a finding that all applicable criteria have been met.

10.1 Utilization of the Site

Utilization of the Site - The plan for the development, including buildings, lots, and support facilities, must reflect the natural capabilities of the site to support development. Environmentally sensitive areas, including but not limited to, wetlands, steep slopes, floodplains, significant wildlife habitats, fisheries, scenic areas, habitat for rare and endangered plants and animals, unique natural communities and natural areas, and sand and gravel aquifers must be maintained and preserved to the maximum extent. The development must include appropriate measures for protecting these resources, including but not limited to, modification of the proposed design of the site, timing of construction, and limiting the extent of excavation.

The proposal is to expand an existing parking lot so the utilization of the site will not be changing.

Based on the above findings of fact, the Board finds the standards of this section have been met.

10.2 Traffic, Circulation and Parking

10.2.1 Traffic Access and Parking

Vehicular access to and from the development must be safe and convenient.

10.2.1.1 Any driveway or proposed street must be designed so as to provide the minimum sight distance according to the Maine Department of Transportation standards, to the maximum extent possible.

10.2.1.2 Points of access and egress must be located to avoid hazardous conflicts with existing turning movements and traffic flows.

10.2.1.3 The grade of any proposed drive or street must be not more than +3% for a minimum of two (2) car lengths, or forty (40) feet, from the intersection.

10.2.1.4 The intersection of any access/egress drive or proposed street must function: (a) at a Level of Service D, or better, following development if the project will generate one thousand (1,000) or more vehicle trips per twenty-four (24) hour period; or (b) at a level which will allow safe access into and out of the project if less than one thousand (1,000) trips are generated.

10.2.1.5 Where a lot has frontage on two (2) or more streets, the primary access to and egress from the lot must be provided from the street where there is less potential for traffic congestion and for traffic and pedestrians hazards. Access from other streets may be allowed if it is safe and does not promote short cutting through the site.

10.2.1.6 Where it is necessary to safeguard against hazards to traffic and pedestrians and/ or to avoid traffic congestion, the applicant shall be responsible for providing turning lanes, traffic directional islands, and traffic controls within public streets.

10.2.1.7 Access ways must be designed and have sufficient capacity to avoid queuing of entering vehicles on any public street.

10.2.1.8 The following criteria must be used to limit the number of driveways serving a proposed project:

- a. No use which generates less than one hundred (1) vehicle trips per day shall have more than one (1) two-way driveway onto a single roadway. Such driveway must be no greater than thirty (30) feet wide.
- b. No use which generates one hundred (1) or more vehicle trips per day shall have more than two (2) points of entry from and two (2) points of egress to a single roadway. The combined width of all access ways must not exceed sixty (60) feet.

10.2.2 Access way Location and Spacing

Access ways must meet the following standards:

10.2.2.1 Private entrance / exits must be located at least fifty (50) feet from the closest un-signalized intersection and one hundred fifty (150) feet from the closest signalized intersection, as measured from the point of tangency for the corner to the point of tangency for the access way.

This requirement may be reduced if the shape of the site does not allow conformance with this standard.

10.2.2.2 Private access ways in or out of a development must be separated by a minimum of seventy-five (75) feet where possible.

10.2.3 Internal Vehicular Circulation

The layout of the site must provide for the safe movement of passenger, service, and emergency vehicles through the site.

10.2.3.1 Projects that will be served by delivery vehicles must provide a clear route for such vehicles with appropriate geometric design to allow turning and backing.

10.2.3.2 Clear routes of access must be provided and maintained for emergency vehicles to and around buildings and must be posted with appropriate signage (fire lane - no parking).

10.2.3.3 The layout and design of parking areas must provide for safe and convenient circulation of vehicles throughout the lot.

10.2.3.4 All roadways must be designed to harmonize with the topographic and natural features of the site insofar as practical by minimizing filling, grading, excavation, or other similar activities which result in unstable soil conditions and soil erosion, by fitting the development to the natural contour of the land and avoiding substantial areas of excessive grade and tree removal, and by retaining existing vegetation during construction. The road network must provide for vehicular, pedestrian, and cyclist safety, all season emergency access, snow storage, and delivery and collection services.

10.2.4 Parking Layout and Design

Off street parking must conform to the following standards:

10.2.4.1 Parking areas with more than two (2) parking spaces must be arranged so that it is not necessary for vehicles to back into the street.

10.2.4.2 All parking spaces, access drives, and impervious surfaces must be located at least fifteen (15) feet from any side or rear lot line, except where standards for buffer yards require a greater distance. No parking spaces or asphalt type surface shall be located within fifteen (15) feet of the front property line. Parking lots on adjoining lots may be connected by accessways not exceeding twenty-four (24) feet in width.

10.2.4.3 Parking stalls and aisle layout must conform to the following standards.

Parking Angle	Stall Width	Skew Width	Stall Depth	Aisle Width
90°	9'-0"		18'-0"	24'-0" 2-way
60°	8'-6"	10'-6"	18'-0"	16'-0" 1-way
45°	8'-6"	12'-9"	17'-6"	12'-0" 1-way
30°	8'-6"	17'-0"	17'-0"	12'-0" 1 way

10.2.4.4 In lots utilizing diagonal parking, the direction of proper traffic flow must be indicated by signs, pavement markings or other permanent indications and maintained as necessary.

10.2.4.5 Parking areas must be designed to permit each motor vehicle to proceed to and from the parking space provided for it without requiring the moving of any other motor vehicles.

10.2.4.6 Provisions must be made to restrict the "overhang" of parked vehicles when it might restrict traffic flow on adjacent through roads, restrict pedestrian or bicycle movement on adjacent walkways, or damage landscape materials.

The additional parking will have no negative impact on these standards.

Based on the above findings of fact, the Board finds the standards of this section have been met.

10.2.5 Building and Parking Placement

10.2.5.1 The site design should avoid creating a building surrounded by a parking lot. Parking should be to the side and preferably in the back. In rural, uncongested areas buildings should be set well back from the road so as to conform to the rural character of the area. If the parking is in front, a generous, landscaped buffer between road and parking lot is to be provided. Unused areas should be kept natural, as field, forest, wetland, etc.

10.2.5.2 Where two or more buildings are proposed, the buildings should be grouped and linked with sidewalks; tree planting should be used to provide shade and break up the scale of the site. Parking areas should be separated from the building by a minimum of five (5) to ten (10) feet. Plantings should be provided along the building edge, particularly where building facades consist of long or unbroken walls.

10.2.6 Pedestrian Circulation

The site plan must provide for a system of pedestrian ways within the development appropriate to the type and scale of development. This system must connect the major building entrances/ exits with parking areas and with existing sidewalks, if they exist or are planned in the vicinity of the project. The pedestrian network may be located either in

the street right-of-way or outside of the right-of-way in open space or recreation areas. The system must be designed to link the project with residential, recreational, and commercial facilities, schools, bus stops, and existing sidewalks in the neighborhood or, when appropriate, to connect the amenities such as parks or open space on or adjacent to the site.

The additional parking will have no negative impact on these standards.

Based on the above findings of fact, the Board finds the standards of this section have been met.

10.3 Stormwater Management and Erosion Control

10.3.1 Stormwater Management

Adequate provisions must be made for the collection and disposal of all stormwater that runs off proposed streets, parking areas, roofs, and other surfaces, through a stormwater drainage system and maintenance plan, which must not have adverse impacts on abutting or downstream properties.

10.3.1.1 To the extent possible, the plan must retain stormwater on the site using the natural features of the site.

10.3.1.2 Unless the discharge is directly to the ocean or major river segment, stormwater runoff systems must detain or retain water such that the rate of flow from the site after development does not exceed the predevelopment rate.

10.3.1.3 The applicant must demonstrate that on - and off-site downstream channel or system capacity is sufficient to carry the flow without adverse effects, including but not limited to, flooding and erosion of shoreland areas, or that he / she will be responsible for whatever improvements are needed to provide the required increase in capacity and / or mitigation.

10.3.1.4 All natural drainage ways must be preserved at their natural gradients and must not be filled or converted to a closed system unless approved as part of the site plan review.

10.3.1.5 The design of the stormwater drainage system must provide for the disposal of stormwater without damage to streets, adjacent properties, downstream properties, soils, and vegetation.

10.3.1.6 The design of the storm drainage systems must be fully cognizant of upstream runoff which must pass over or through the site to be developed and provide for this movement.

10.3.1.7 The biological and chemical properties of the receiving waters must not be degraded by the stormwater runoff from the development site. The use of oil and grease traps in manholes, the use of on-site vegetated waterways, and vegetated buffer strips along waterways and drainage swales, and the reduction in use of deicing salts and fertilizers may be required, especially where the development stormwater discharges into a gravel aquifer area or other water supply source, or a great pond.

10.3.2 Erosion Control

10.3.2.1 All building, site, and roadway designs and layouts must harmonize with existing topography and conserve desirable natural surroundings to the fullest extent possible, such that filling, excavation and earth moving activity must be kept to a minimum. Parking lots on sloped sites must be terraced to avoid undue cut and fill, and / or the need for retaining walls. Natural vegetation must be preserved and protected wherever possible.

10.3.2.2 Soil erosion and sedimentation of watercourses and water bodies must be minimized by an active program meeting the requirements of the Maine Erosion and Sediment Control Handbook for Construction: Best Management Practices, dated March 1991, and as amended from time to time.

A complete stormwater report has been completed for the proposed development and has been included in submission packet.

An erosion control report has been prepared and is included in the submission packet. The Town Engineer has reviewed and approved the stormwater and erosion control plan.

Based on the above findings of fact, the Board finds the standards of this section have been met.

10.4 Water, Sewer, Utilities and Fire Protection

10.4.1 Water Supply Provisions

The development must be provided with a system of water supply that provides each use with an adequate supply of water. If the project is to be served by a public water supply, the applicant must secure and submit a written statement from the supplier that the proposed water supply system conforms with its design and construction standards, will not result in an undue burden on the source of distribution system, and will be installed in a manner adequate to provide needed domestic and fire protection flows.

10.4.2 Sewage Disposal Provisions

The development must be provided with a method of disposing of sewage which is in compliance with the State Plumbing Code. If provisions are proposed for on-site waste disposal, all such systems must conform to the Subsurface Wastewater Disposal Rules.

10.4.3 Utilities

The development must be provided with electrical, telephone, and telecommunication service adequate to meet the anticipated use of the project. New utility lines and facilities must be screened from view to the extent feasible. If the service in the street or on adjoining lots is underground, the new service must be placed underground.

10.4.4 Fire Protection

The site design must comply with the Fire Protection Ordinance. The Fire Chief shall issue the applicant a "Certificate of Compliance" once the applicant has met the design requirement of the Town's Fire Protection Ordinance.

N/A

10.5 Water Protection

10.5.1 Groundwater Protection

The proposed site development and use must not adversely impact either the quality or quantity of groundwater available to abutting properties or to the public water supply systems. Applicants whose projects involve on-site water supply or sewage disposal systems with a capacity of two thousand (2,000) gallons per day or greater must demonstrate that the groundwater at the property line will comply, following development, with the standards for safe drinking water as established by the State of Maine.

The project will not utilize subsurface water or produce 2,000 gallons or greater per day of wastewater. Storage of fuels or chemicals is not anticipated.

10.5.2 Water Quality

All aspects of the project must be designed so that:

10.5.2.1 No person shall locate, store, discharge, or permit the discharge of any treated, untreated, or inadequately treated liquid, gaseous, or solid materials of such nature, quantity, obnoxious, toxicity, or temperature that may run off, seep, percolate, or wash into surface or groundwaters so as to contaminate, pollute, or harm such waters or cause nuisances, such as objectionable shore deposits, floating or

submerged debris, oil or scum, color, odor, taste, or unsightliness or be harmful to human, animal, plant, or aquatic life.

10.5.2.2 All storage facilities for fuel, chemicals, chemical or industrial wastes, and biodegradable raw materials, must meet the standards of the Maine Department of Environmental Protection and the State Fire Marshall's Office.

There is no outdoor storage of petroleum products. A dumpster and underground propane tank are shown on the site plan.

10.5.3 Aquifer Protection

If the site is located within the Town Aquifer Protection Area, a positive finding by the Board that the proposed plan will not adversely affect the aquifer is required.

The site is not located within the Town Aquifer Protection Area.

10.6 Floodplain Management

If any portion of the site is located within a special flood hazard area as identified by the Federal Emergency Management Agency, all use and development of that portion of the site must be consistent with the Town's Floodplain management provisions.

The site is not located within a floodplain.

Based on the above finding of fact, the Board finds the standards of this section have been met.

10.7 Historic and Archaeological Resources

If any portion of the site has been identified as containing historic or archaeological resources, the development must include appropriate measures for protecting these resources, including but not limited to, modification of the proposed design of the site, timing of construction, and limiting the extent of excavation.

There are no apparent historic or archaeological resources on the site..

Based on the above finding of fact, the Board finds the standards of this section have been met.

10.8 Exterior Lighting

The proposed development must have adequate exterior lighting to provide for its safe use during nighttime hours, if such use is contemplated. All exterior

lighting must be designed and shielded to avoid undue glare, adverse impact on neighboring properties and rights - of way, and the unnecessary lighting of the night sky.

***The lighting plan has been reviewed and approved by the Town Engineer.
Based on the above findings of fact, the Board finds the standards of this section have been met.***

10.9 Buffering and Landscaping

10.9.1 Buffering of Adjacent Uses

The development must provide for the buffering of adjacent uses where there is a transition from one type of use to another use and for the screening of mechanical equipment and service and storage areas. The buffer may be provided by distance, landscaping, fencing, changes in grade, and / or a combination of these or other techniques.

10.9.2 Landscaping

Landscaping must be provided as part of site design. The landscape plan for the entire site must use landscape materials to integrate the various elements on site, preserve and enhance the particular identity of the site, and create a pleasing site character. The landscaping should define street edges, break up parking areas, soften the appearance of the development, and protect abutting properties.

A landscaping plan is included in the plan set; it shows a mixture of plantings that are suitable to the site and provide for a pleasing effect and buffering for adjacent properties.

Based on the above findings of fact, the Board finds the standards of this section have been met.

10.0 Noise

The development must control noise levels such that it will not create a nuisance for neighboring properties.

**The only noise impacts will be during construction.
Based on the above findings of fact, the Board finds the standards of this section have been met.**

10.11 Storage of Materials

10.11.1 Exposed nonresidential storage areas, exposed machinery, and areas used for the storage or collection of discarded automobiles, auto parts, metals or other articles of salvage or refuse must have sufficient setbacks and screening (such as a stockade fence or a dense evergreen hedge) to provide a

visual buffer sufficient to minimize their impact on abutting residential uses and users of public streets.

10.11.2 All dumpsters or similar large collection receptacles for trash or other wastes must be located on level surfaces which are paved or graveled. Where the dumpster or receptacle is located in a yard which abuts a residential or institutional use or a public street, it must be screened by fencing or landscaping.

10.11.3 Where a potential safety hazard to children is likely to arise, physical screening sufficient to deter small children from entering the premises must be provided and maintained in good condition.

There will be no outdoor storage of petroleum products.

Based on the above findings of fact, the Board finds the standards of this section have been met.

10.12 Capacity of the Applicant

The applicant must demonstrate that he / she has the financial and technical capacity to carry out the project in accordance with this ordinance and the approved plan.

- **Technical Ability:** *The applicant has retained Charlie Burnham, P.E. to prepare the application and Boundary Points Surveying to conduct the survey.*
- **Financial Capacity:** *The Town of Cumberland has the financial capacity to cover all costs associated with the project.*

Based on the above findings of fact, the Board finds the standards of this section have been met.

LIMITATION OF APPROVAL:

Construction of the improvements covered by any site plan approval must be substantially commenced within twelve (12) months of the date upon which the approval was granted. If construction has not been substantially commenced and substantially completed within the specified period, the approval shall be null and void. The applicant may request an extension of the approval deadline prior to expiration of the period. Such request must be in writing and must be made to the Planning Board. The Planning Board may grant up to two (2), six (6) month extensions to the periods if the approved plan conforms to the ordinances in effect at the time the extension is granted and any and all federal and state approvals and permits are current.

STANDARD CONDITION OF APPROVAL:

This approval is dependent upon and limited to the proposals and plans contained in the application and supporting documents submitted by the applicant. Any variation from the plans, proposals and supporting documents, except de minimus changes as so determined by the Town Planner which do not affect approval standards, is subject to review and approval of the Planning Board prior to implementation.

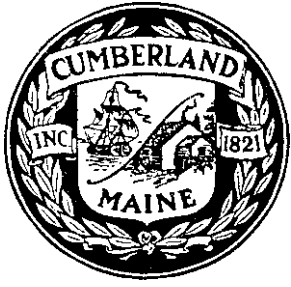
CONDITIONS OF APPROVAL:

- 1.

Town of Cumberland Site Plan Review Application
Prince Memorial Parking Expansion
266 Main Street
Cumberland Center, Maine



August 28, 2018 Submitted by
William R. Shane, Town Manager



TOWN OF CUMBERLAND, MAINE
290 TUTTLE ROAD
CUMBERLAND, MAINE 04021
TEL: (207) 829-2205
FAX: (207) 829-2224

August 28, 2018

Prince Memorial Library Parking Expansion

Dear Members of the Planning Board:

The Town of Cumberland is requesting Planning Board approval for the construction of 11 additional parking spaces at Prince Memorial Library at 266 Main Street. The proposed 3,200 square feet of impervious surface requires Site Plan Review under *Section 2: Classification* of the Town of Cumberland's Site Plan Ordinance.

The following consultants were used in preparing the application.

Engineer:

Charlie Burnham, P.E.
38 Grange Hall Road
New Gloucester, Maine
04260

207-712-6990
charlie@grangeng.com

Surveyor:

Professional Land Surveying, LLC
P.O. Box 175
Cumberland, Maine
04021-0175

207-854-1015

Please let me know if you require any additional information in review of this application. Sincerely,

William R. Shane, P.E.
Town Manager

Section 10: Approval Standards and Criteria

10. 1: Utilization of the Site

The additional parking will be an extension of the current parking lot. The utilization of the site will not change.

10.2: Traffic, Circulation and Parking

- 10.2.1** The additional parking will have no negative impact on traffic, access and parking. In fact, the parking spaces do not generate any additional use, but instead will reduce congestion associated with the current use.
- 10.2.2** No modifications to the access ways are proposed.
- 10.2.3** The internal vehicular circulation will be a slightly longer version of what currently exists, no negative effects expected.
- 10.2.4** The eleven (11) proposed parking spaces are in a 90-degree configuration with the required nine (9) foot width and eighteen (18) foot depth. The existing twenty-four (24) foot travel way will be extended approximately 50 feet and a new turnaround, similar to what is existing, will be constructed at the end.
- 10.2.5** The parking placement will be consistent with what is existing and there are no new buildings associated with this project.
- 10.2.6** Pedestrian circulation will continue as existing.

10.3: Stormwater Management and Erosion Control

- 10.3.1** A Stormwater Management Plan is included as Attachment 2 to this Application. The proposed parking lot expansion will implement a grass lined ditch and detention pond to transport and control the stormwater runoff. The stormwater system will detain water such that the rate of flow from the site after development does not exceed the predevelopment rate.
- 10.3.2** An Erosion Control Plan is included as Attachment 3 to this Application. The proposed erosion control will include erosion control mix berms being placed around the downstream perimeter of all disturbed areas. Final stabilization will occur as quickly as possible.

10.4: Water, Sewer, and Fire

The proposed project will have no impact on the water supply, sewage disposal, utilities, or fire protection for the existing facilities.

10.5: Water Protection

- 10.5.1** The additional parking will not impact the groundwater of any abutters or public water supplies.
- 10.5.2** The project will create no risk to the water quality of any human, animal, plant, or aquatic life

10.6: Floodplain Management

The site is not located within any special flood hazard area.

10.7: Historical and Archaeological resources

The proposed use will have no impact related to this review criteria.

10.8: Exterior lights

Lighting has been provided. Location of proposed lights are shown on the Site Plan. Attached to this application is the cut sheet and photometric plan for the proposed light fixtures.

10.9: Buffering and Landscaping

The tree line will not be impacted as part of this project and landscaping will be consistent with what currently exists. A waiver is requested for any landscaping requirements. The proposed “landscaping” is consistent with existing.

10.10: Noise

The only noise impacts associated with this project will be during construction.

10.11: Storage of Materials

The proposed use will have no impact related to this review criteria.

10.12: Capacity of the Applicant

The Town of Cumberland has the financial capacity to cover all costs associated with the project.

10.13: Design and Performance Standards

The proposed parking has been designed in accordance with the Town Performance Standards. The applicable setbacks and sizing standards are shown on the Site Plan included in Attachment 6 of this application.

ATTACHMENT 1
APPLICATION FORM

**SITE PLAN REVIEW
Town of Cumberland**

**Appendix C
Planning Board Site Plan Review Application**

Applicant's name _____

Applicant's address _____

Cell phone _____ Home phone _____ Office phone _____

Email Address _____

Project address _____

Project name _____

Describe project _____

Number of employees _____

Days and hours of operation _____

Project review and notice fee _____

Name of representative _____

Contact information: Cell: _____ Office: _____

What is the applicant's interest in the property?

Own _____ Lease _____ Purchase and sale agreement _____ (provide copy of document)

If you are not the owner, list owner's name, address and phone number _____

If you are not the owner, list owner's name, address and phone number _____

Boundary Survey

Submitted? Yes _____ No _____

Are there any deed restrictions or easements? Yes _____ No _____ If yes, provide information and show easement location on site plan.

Building Information

Are there existing buildings on the site? Yes _____ No _____ Number: _____

Will they be removed? Yes _____ No _____ (Note: A demolition permit is required 10 days prior to demolition.)

Will a new structure(s) be built on the site? Yes _____ No _____

Describe: _____

Number of new buildings _____

Square footage _____

Number of floor levels including basement _____

Parking

Number of existing parking spaces _____

Number of new parking spaces _____

Number of handicapped spaces _____

Will parking area be paved? ____ Yes ____ No

Entrance

Location: _____

Width _____ Length _____

Is it paved? ____ Yes ____ No ____ If not, do you plan to pave it?

Where will snow storage for entrance and parking be located? Show on site plan.

Utilities**Water:** Public water ____ Well ____ (Show location on site plan.)**Sewer/septic:** Public sewer ____ Private septic ____ Show location on site plan and submit HHE-200 septic design or location of passing test pit locations if new system is proposed. Also show any wells on abutting properties within 200 feet of the site.**Electric:** On site? Yes ____ No ____

Show location of existing and proposed utilities on the site plan and indicate if they are above or below ground.

Signs

Number: _____

Size: _____

Material: _____

Submit sign design and completed sign application.

Will the sign be lighted? ____ Submit information on type and wattage of lights.

Show location of sign(s) on the site plan.

Natural Features

Show location of any of the following on the site plan:

River ____ Stream ____ Wetland ____ Pond ____ Lake ____ Stone walls ____

Are there any other historic or natural features? _____

Lighting

Will there be any exterior lights? Yes ____ No ____ Show location on site plan (e.g., pole fixtures, wall packs on building) and provide fixture and lumen information.

Trees

Show location of existing trees on the site plan and indicate if any are to be removed.

Landscaping

Is there existing landscaping on the site? Yes ____ No ____ Show type and location on site plan.

Is new landscaping proposed? (Note: if property has frontage on Route 100, a twenty-five-foot landscape easement to the Town is required.)

Buffering

Show any existing or proposed buffering measures for adjacent properties, e.g., plantings, fences.

Erosion Control

Has an erosion and sedimentation control plan been submitted? Yes _____ No _____

Stormwater Management Plan

Provide stormwater information for both pre and post development of the site. Show location of any detention areas and/or culverts on the site plan.

Fire Protection

Location of nearest hydrant _____ Sprinklers? Yes _____ No _____

Do you plan to have an alarm system? Yes _____ No _____ Please contact the Fire/EMS Department at 829-4573 to discuss any Town or state requirements.

Trash

Will trash be stored inside _____ outside _____. If outside, will a dumpster be used?

Yes _____ No _____. Show location on site plan and show type of screening proposed (e.g., fencing, plantings).

Technical Capacity

List and provide contact information for all consultants who worked on the project, for example: licensed land surveyor, licensed soils evaluator, professional engineer, attorney, etc.

Financial Capacity

Please indicate how project will be financed. If obtaining a bank loan, provide a letter from the bank _____

-
- Zoning district: _____
 - Minimum lot size: _____
 - Classification of proposed use: _____
 - Parcel size: _____
 - Frontage: _____
 - Setbacks: Front _____ Side _____ Rear _____
 - Board of Appeals Required? _____
 - Tax Map _____ Lot _____ Deed book _____ Deed page _____
 - Floodplain map number _____ Designation _____
 - Vernal pool identified? _____
 - Is parcel in a subdivision? _____
 - Outside agency permits required:
MDEP Tier 1 _____ MDEP Tier 2 _____ Army Corps of Engineers _____
MDEP general construction (stormwater) permit (for disturbance of 1 acre or more)
 - MDOT entrance permit _____
 - MDOT traffic movement permit _____
 - Traffic study required _____
 - Hydrogeologic evaluation _____
 - Market study _____
 - Route 1 Design Guidelines? _____
 - Route 100, VMU or TCD Design Standards? _____

Applicant's signature _____

Submission date: _____

PLANNING BOARD SITE PLAN REVIEW **SUBMISSION CHECKLIST**

FOR ALL PROJECTS:

Submission Requirement	Provide Location in Application Packet (e.g., plan sheet number, binder section, narrative	If requesting a waiver, indicate below:
<i>Example: Erosion Control</i>	<i>Plan Sheet E-1</i>	
General Information:		
Completed Site Plan Application Form		
Names and addresses of all consultants		
Narrative describing existing conditions and the proposed project		
Evidence of right, title or interest (deed, option, etc.)		
Names and Addresses of all property owners within 200 feet		
Boundaries of all contiguous property under control of owner		
Tax map and lot numbers		
Area of the parcel		
FEMA Floodplain designation & map #		
Zoning classification		
Evidence of technical and financial capability to carry out the project		
Boundary survey		
List of waiver requests on separate sheet with reason for request.		
Proposed solid waste disposal plan		
Existing Conditions Plan showing:		
Name, registration number and seal of person who prepared plan		
North arrow, date, scale, legend		
Area of the parcel		
Setbacks and building envelope		
Utilities, including sewer & water, culverts & drains, on-site sewage		
Location of any septic systems		
Location, names, widths of existing public or private streets ROW's		

Location, dimension of ground floor elevation of all existing buildings		
Location, dimension of existing driveways, parking, loading, walkways		
Location of intersecting roads & driveways within 200 feet of the site		
Wetland areas		
Natural and historic features such as water bodies, stands of trees, streams, graveyards, stonewalls, floodplains		
Direction of existing surface water drainage across the site & off site		
Location, front view, dimensions and lighting of existing signs		
Location and dimensions of existing easements & copies of documents		
Location of nearest fire hydrant or water supply for fire protection		
Proposed Development Site Plan showing:		
Name of development		
Date		
North arrow		
Scale		
Legend		
Landscape plan		
Stormwater management		
Wetland delineation		
Current & proposed stands of trees		
Erosion control plan		
Landscape plan		
Lighting/photometric plan		
Location and dimensions of all proposed buildings		
Location and size of utilities, including sewer, water, culverts and drains		
Location and dimension of proposed on-site septic system; test pit locations and nitrate plumes		
Location of wells on subject property and within 200' of the site		
Location, names and widths of existing and proposed streets and ROW's		

Location and dimensions of all accessways and loading and unloading facilities		
Location and dimension of all existing and proposed pedestrian ways		
Location, dimension and # of spaces of proposed parking areas, including handicapped spaces		
Total floor area and ground coverage of each proposed building and structure		
Proposed sign location and sign lighting		
Proposed lighting location and details		
Covenants and deed restrictions proposed		
Snow storage location		
Solid waste storage location and fencing/buffering		
Location of all fire protection		
Location of all temporary & permanent monuments		
Street plans and profiles		

ADDITIONAL REQUIREMENTS FOR MAJOR SITE PLAN PROJECTS:

Submission Requirement	Provide Location in Application Packet (e.g., plan sheet number, binder section, narrative)	If requesting a waiver, indicate below:
High intensity soils survey		
Hydro geologic evaluation		
Traffic Study		
Market Study		
Location of proposed recreation areas (parks, playgrounds, other public areas)		
Location and type of outdoor furniture and features such as benches, fountains.		

ATTACHMENT 2
STORMWATER MANAGEMENT REPORT

STORMWATER MANAGEMENT REPORT
PRINCE MEMORIAL LIBRARY PARKING EXPANSION
266 MAIN STREET, CUMBERLAND

This Stormwater Management Report is for the proposed parking expansion at the Prince Memorial Library in Cumberland, Maine (Project). This report addresses the requirements for Stormwater Management described in Sub-Section C of Chapter 229- Section 10 in the Town of Cumberland Zoning Ordinance. Each requirement is addressed below.

(a) To the extent possible, the plan must retain stormwater on the site using the natural features of the site.

The stormwater will be detained by a small detention pond along the south side of the existing parking lot. There are no natural features that will provide any retention of stormwater.

(b) Unless the discharge is directly to the ocean or major river segment, stormwater runoff systems must detain or retain water such that the rate of flow from the site after development does not exceed the predevelopment rate.

The runoff from the proposed parking lot expansion will be directed to a small detention pond that will buffer any impacts to the rate of flow from the site. Table 1 below summarizes the peak flows of the existing and proposed conditions. Existing and Proposed Hydrocad Models for the area are included at the end of this Report.

Table 1- Peak Flows

	Existing	Proposed	Difference
2 Year	0.42	0.24	-0.18
10 Year	1.04	1.05	0.01
25 Year	1.61	1.61	0

(c) The applicant must demonstrate that on- and off-site downstream channel or system capacity is sufficient to carry the flow without adverse effects, including but not limited to flooding and erosion of shoreland areas, or that he/she will be responsible for whatever improvements are needed to provide the required increase in capacity and/or mitigation.

Runoff is managed using a grass lined and detention pond. The flows leaving the sight are minimal and pose no erosion or flooding threat.

(d) All natural drainageways must be preserved at their natural gradients and must not be filled or converted to a closed system unless approved as part of the site plan review.

Not Applicable.

(e) The design of the stormwater drainage system must provide for the disposal of stormwater without damage to streets, adjacent properties, downstream properties, soils, and vegetation.

No damage to streets, adjacent properties, or downstream properties soils and vegetation is expected as a result of this project.

(f) The design of the storm drainage systems must be fully cognizant of upstream runoff which must pass over or through the site to be developed and provide for this movement.

The existing topography includes a local high point that directs water around the area being developed. The area that drains to the proposed stormwater system is shown on Plan C-2 in the Attachment 4 of this Application.

(g) The biological and chemical properties of the receiving waters must not be degraded by the stormwater runoff from the development site. The use of oil and grease traps in manholes, the use of on-site vegetated waterways and vegetated buffer strips along waterways and drainage swales, and the reduction in use of deicing salts and fertilizers may be required, especially where the development stormwater discharges into a gravel aquifer area or other water supply source or a great pond.

Grassed lined ditches are proposed to convey the stormwater to the detention pond.

In conclusion the proposed parking lot expansion will which must not have adverse impacts on abutting or downstream properties.

Existing

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Page 2

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.348	61	>75% Grass cover, Good, HSG B (SC-1)
0.134	98	Impervious (SC-1)
0.037	55	Woods, Good, HSG B (SC-1)
0.520	70	TOTAL AREA

Existing

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Type III 24-hr 2-Yr Rainfall=3.10"

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Page 3

Summary for Subcatchment SC-1:

Runoff = 0.42 cfs @ 12.09 hrs, Volume= 0.033 af, Depth> 0.77"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Type III 24-hr 2-Yr Rainfall=3.10"

	Area (sf)	CN	Description
*	5,833	98	Impervious
	15,174	61	>75% Grass cover, Good, HSG B
	1,633	55	Woods, Good, HSG B
	22,640	70	Weighted Average
	16,807		74.24% Pervious Area
	5,833		25.76% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry, 5 Minute Min

Existing

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Type III 24-hr 10-Yr Rainfall=4.60"

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Page 4

Summary for Subcatchment SC-1:

Runoff = 1.04 cfs @ 12.08 hrs, Volume= 0.076 af, Depth> 1.74"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Yr Rainfall=4.60"

	Area (sf)	CN	Description
*	5,833	98	Impervious
	15,174	61	>75% Grass cover, Good, HSG B
	1,633	55	Woods, Good, HSG B
	22,640	70	Weighted Average
	16,807		74.24% Pervious Area
	5,833		25.76% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry, 5 Minute Min

Existing

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Type III 24-hr 25-Yr Rainfall=5.80"

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Summary for Subcatchment SC-1:

Runoff = 1.61 cfs @ 12.08 hrs, Volume= 0.115 af, Depth> 2.65"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Type III 24-hr 25-Yr Rainfall=5.80"

	Area (sf)	CN	Description
*	5,833	98	Impervious
	15,174	61	>75% Grass cover, Good, HSG B
	1,633	55	Woods, Good, HSG B
	22,640	70	Weighted Average
	16,807		74.24% Pervious Area
	5,833		25.76% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry, 5 Minute Min

Proposed

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Type III 24-hr 2-Yr Rainfall=3.10"

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Page 1

Summary for Subcatchment SC-1:

Runoff = 0.60 cfs @ 12.09 hrs, Volume= 0.044 af, Depth> 1.03"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Yr Rainfall=3.10"

	Area (sf)	CN	Description
*	9,022	98	Impervious
	11,985	61	>75% Grass cover, Good, HSG B
	1,633	55	Woods, Good, HSG B
	22,640	75	Weighted Average
	13,618		60.15% Pervious Area
	9,022		39.85% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry, 5 Minute Min

Summary for Pond P-1: Infiltration Basin

Inflow Area = 0.520 ac, 39.85% Impervious, Inflow Depth > 1.03" for 2-Yr event
 Inflow = 0.60 cfs @ 12.09 hrs, Volume= 0.044 af
 Outflow = 0.25 cfs @ 12.36 hrs, Volume= 0.034 af, Atten= 58%, Lag= 16.4 min
 Discarded = 0.02 cfs @ 12.36 hrs, Volume= 0.015 af
 Primary = 0.24 cfs @ 12.36 hrs, Volume= 0.019 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 Peak Elev= 162.28' @ 12.36 hrs Surf.Area= 925 sf Storage= 602 cf

Plug-Flow detention time= 157.8 min calculated for 0.034 af (75% of inflow)
 Center-of-Mass det. time= 66.5 min (925.8 - 859.3)

Volume	Invert	Avail.Storage	Storage Description
#1	161.00'	1,557 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
161.00	162	0	0
162.00	612	387	387
163.00	1,728	1,170	1,557

Device	Routing	Invert	Outlet Devices
#1	Primary	162.17'	2.0' long Sharp-Crested Rectangular Weir 2 End Contraction(s)
#2	Discarded	161.00'	0.600 in/hr Exfiltration over Surface area Conductivity to Groundwater Elevation = 159.00'

Proposed

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Type III 24-hr 2-Yr Rainfall=3.10"

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Page 2

Discarded OutFlow Max=0.02 cfs @ 12.36 hrs HW=162.28' (Free Discharge)

↑**2=Exfiltration** (Controls 0.02 cfs)

Primary OutFlow Max=0.24 cfs @ 12.36 hrs HW=162.28' (Free Discharge)

↑**1=Sharp-Crested Rectangular Weir** (Weir Controls 0.24 cfs @ 1.08 fps)

Proposed

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Type III 24-hr 10-Yr Rainfall=4.60"

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Summary for Subcatchment SC-1:

Runoff = 1.29 cfs @ 12.08 hrs, Volume= 0.092 af, Depth> 2.13"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Yr Rainfall=4.60"

	Area (sf)	CN	Description
*	9,022	98	Impervious
	11,985	61	>75% Grass cover, Good, HSG B
	1,633	55	Woods, Good, HSG B
	22,640	75	Weighted Average
	13,618		60.15% Pervious Area
	9,022		39.85% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry, 5 Minute Min

Summary for Pond P-1: Infiltration Basin

Inflow Area = 0.520 ac, 39.85% Impervious, Inflow Depth > 2.13" for 10-Yr event
 Inflow = 1.29 cfs @ 12.08 hrs, Volume= 0.092 af
 Outflow = 1.08 cfs @ 12.14 hrs, Volume= 0.080 af, Atten= 17%, Lag= 3.6 min
 Discarded = 0.02 cfs @ 12.14 hrs, Volume= 0.016 af
 Primary = 1.05 cfs @ 12.14 hrs, Volume= 0.064 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 Peak Elev= 162.47' @ 12.14 hrs Surf.Area= 1,139 sf Storage= 801 cf

Plug-Flow detention time= 85.0 min calculated for 0.080 af (87% of inflow)
 Center-of-Mass det. time= 27.4 min (864.9 - 837.6)

Volume	Invert	Avail.Storage	Storage Description
#1	161.00'	1,557 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
161.00	162	0	0
162.00	612	387	387
163.00	1,728	1,170	1,557

Device	Routing	Invert	Outlet Devices
#1	Primary	162.17'	2.0' long Sharp-Crested Rectangular Weir 2 End Contraction(s)
#2	Discarded	161.00'	0.600 in/hr Exfiltration over Surface area Conductivity to Groundwater Elevation = 159.00'

Proposed

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Type III 24-hr 10-Yr Rainfall=4.60"

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Discarded OutFlow Max=0.02 cfs @ 12.14 hrs HW=162.47' (Free Discharge)

↑**2=Exfiltration** (Controls 0.02 cfs)

Primary OutFlow Max=1.04 cfs @ 12.14 hrs HW=162.47' (Free Discharge)

↑**1=Sharp-Crested Rectangular Weir** (Weir Controls 1.04 cfs @ 1.79 fps)

Proposed

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Type III 24-hr 25-Yr Rainfall=5.80"

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Summary for Subcatchment SC-1:

Runoff = 1.90 cfs @ 12.08 hrs, Volume= 0.135 af, Depth> 3.11"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Yr Rainfall=5.80"

	Area (sf)	CN	Description
*	9,022	98	Impervious
	11,985	61	>75% Grass cover, Good, HSG B
	1,633	55	Woods, Good, HSG B
	22,640	75	Weighted Average
	13,618		60.15% Pervious Area
	9,022		39.85% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry, 5 Minute Min

Summary for Pond P-1: Infiltration Basin

Inflow Area = 0.520 ac, 39.85% Impervious, Inflow Depth > 3.11" for 25-Yr event
 Inflow = 1.90 cfs @ 12.08 hrs, Volume= 0.135 af
 Outflow = 1.63 cfs @ 12.13 hrs, Volume= 0.123 af, Atten= 14%, Lag= 3.0 min
 Discarded = 0.02 cfs @ 12.13 hrs, Volume= 0.017 af
 Primary = 1.61 cfs @ 12.13 hrs, Volume= 0.106 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 Peak Elev= 162.57' @ 12.13 hrs Surf.Area= 1,252 sf Storage= 922 cf

Plug-Flow detention time= 65.1 min calculated for 0.123 af (91% of inflow)
 Center-of-Mass det. time= 21.3 min (847.9 - 826.6)

Volume	Invert	Avail.Storage	Storage Description
#1	161.00'	1,557 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
161.00	162	0	0
162.00	612	387	387
163.00	1,728	1,170	1,557

Device	Routing	Invert	Outlet Devices
#1	Primary	162.17'	2.0' long Sharp-Crested Rectangular Weir 2 End Contraction(s)
#2	Discarded	161.00'	0.600 in/hr Exfiltration over Surface area Conductivity to Groundwater Elevation = 159.00'

Proposed

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Type III 24-hr 25-Yr Rainfall=5.80"

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Discarded OutFlow Max=0.02 cfs @ 12.13 hrs HW=162.57' (Free Discharge)

↑**2=Exfiltration** (Controls 0.02 cfs)

Primary OutFlow Max=1.58 cfs @ 12.13 hrs HW=162.57' (Free Discharge)

↑**1=Sharp-Crested Rectangular Weir** (Weir Controls 1.58 cfs @ 2.06 fps)

ATTACHMENT 3
EROSION AND SEDIMENTATION CONTROL PLAN

EROSION AND SEDIMENTATION CONTROL PLAN
PRINCE MEMORIAL LIBRARY PARKING EXPANSION
266 MAIN STREET, CUMBERLAND

INTRODUCTION

This Erosion and Sedimentation Control Plan (ESC Plan) is for the proposed parking expansion at the Prince Memorial Library in Cumberland, Maine (Project). The ESC Plan was designed to comply with the Maine Erosion and Sediment Control BMP manual prepared by the Maine Department of Environmental Protection.

Design and implementation of erosion and sedimentation control measures that conform to the Maine Erosion and Sediment Control Best Management Practices (BMPs) Manual for Designers and Engineers dated October 2016 (or as currently revised) such that:

- Sediment caused by accelerated soil erosion will be minimized from runoff water before it leaves the site. Suitable erosion control measures will be in-place prior to any disturbance of soil.
- Any temporary and permanent structures designed and constructed for the conveyance of water around, through, or from the site will be designed to limit water flow to a non-erosive velocity.
- Permanent soil erosion control measures for all slopes, channel ditches, and disturbed areas will be completed as part of the Project.
- Vegetative cover for temporary and permanent erosion control will be established using seed selection, seeding rates, and mulching rates consistent with the Maine BMPs and based upon historical site-specific applications. Reseeding will be performed as necessary within a reasonable period if permanent vegetation is not established.
- The proposed Project will utilize existing topography and natural surroundings to the fullest extent possible

SITE STABILIZATION

All Erosion and Sedimentation Control Devices will be constructed in conformance with the Maine Erosion and Sediment Control Best Management Practices (BMPs) Manual for Designers and Engineers dated October, as currently revised; the Erosion and Sedimentation Control Plan as outlined herein and shown on the Construction Drawings; and any conditions of approval as may be contained in the MEDEP Stormwater Law permit for this project.

Disturbed areas will be permanently stabilized within 7 days of final grading. Disturbed areas not to be worked on within 14 days of disturbance will be temporarily stabilized within 7 days of the disturbance.

The following devices will be used to stabilize the site during and after construction. Details for construction and maintenance of erosion and sedimentation control features are provided in the Details and Specifications Section.

- Bark Mulch Sediment Barriers will be installed at locations shown on the Construction Drawings and down slope of disturbed areas until the site is revegetated. Mulch to provide cover for denuded or seeded areas until vegetation is established. Hay/straw mulch will be available on site at all times to provide immediate temporary stabilization when necessary.
- Revegetation of drainage channels with S75 erosion control blanket as manufactured by North American Green or an approved equal.
- Stone check dams, hay bale barriers, and riprapped culvert inlet and outlet aprons to reduce runoff velocities and protect denuded soil surfaces from concentrated flows.
- Stabilized construction entrance(s)/exit(s) at all access points to the site to prevent tracking of soil onto adjacent local roads.
- Loam, seed, and mulch to revegetate all denuded areas not stabilized by other means, such as riprap, intended to be roof, or be a paved or gravel surfaced.

IMPLEMENTATION SCHEDULE

The Town of Cumberland will establish the timing and sequencing of land disturbance. This work will be subject to the limits set forth herein, as may be specified by the Maine Erosion, and Sediment Control Best Management Practices (BMPs) Manual for Designers and Engineers dated October 2016 as currently revised.

In general, construction is expected to begin the spring of 2017.

The Erosion and Sedimentation Control features includes the following elements:

- drainage channels, and
- detention pond.

The general construction sequence of the site is expected to be as follows:

- Mobilization;
- Clearing;
- Install temporary erosion control measures;
- Grubbing and blasting;
- Construct stormwater management structures such as detention pond;
- Complete parking, and circulation areas;
- Site stabilization, pavement, loam and seed, and landscaping;
- Remove temporary erosion control measures.

DETAILS AND SPECIFICATIONS

Temporary and permanent erosion control measures will be implemented to minimize erosion during construction and cover placement. Temporary measures (i.e., silt barriers and silt socks) and permanent measures (i.e., permanent seeding, mulching, and culvert inlet and outlet protection) will be monitored on a regular basis. The contractor will ensure that structures are functioning properly and will perform necessary maintenance described in the Maine Construction General Permit and the Maine BMPs.

Temporary Erosion Control

The greatest potential for erosion will occur during the grading operations. This occurs as topsoil is removed from or disturbed on the site and base grades are prepared. Before beginning the grading phase, a siltation barrier will be placed. Materials and construction methods for siltation barrier shall follow the standards set forth in the DEP erosion control BMP's.

Permanent Erosion Control

Permanent erosion control measures will be implemented during site construction. The disturbed areas that will be left as open space will be seeded and mulched to minimize erosion. The cover will be seeded with a permanent seeding mixture (See Table 1) within 14 days of placing the cover material.

TABLE 1
PERMANENT SEEDING RATES

Mixture	Roadside	Lawn
	(lbs/acre)	(lbs/acre)
Kentucky Bluegrass	20	55
White Clover	5	0
Creeping Red Fescue	20	55
Perennial Ryegrass	5	15
Notes: 1. Apply 10-10-10 fertilizer at a rate of 1,300 lbs. / Ac. (29.8 lbs. / 1,000 S.F.), or as required by topsoil testing Specification Section 02800. 2. Apply liquid limestone at a rate of 3 tons / Ac. (138 lbs. / S.F.) or as required by topsoil testing Specification Section 02800. 3. Apply weed free hay or straw mulch with tack at a rate of 2 tons / Ac. or 300 lbs. / Ac. of fiber mulch.		

disturbed soil shall be protected with mulch consisting of either hay or straw and the temporary seed mixture. The mulch may be required to be secured with netting, twine, or other approved methods. Seeding operations shall be done sequentially as the project development progresses, to minimize, to the great practical extent, areas of the completed cover system exposed to the

elements. Problem areas and continually eroding areas shall be repaired immediately with temporary erosion control blankets. The blankets shall conform and be installed in accordance with the manufacturer's recommendations.

Standard Erosion Control Procedures

Soil erosion and sedimentation control measures will be performed in accordance with procedures outlined in the Maine Erosion and Sediment Control BMPs (Maine Department of Environmental Protection, March 2003) as currently revised. In addition to the above measures, the following erosion and sedimentation control procedures will be implemented during construction and cover placement:

- Removal of trees, brush, and other vegetation, as well as disturbance of soil, will be kept to a minimum during site development.
- Erosion and sedimentation control measures such as bark mulch sediment barriers, silt socks, and a silt barrier will be installed immediately down slope of all disturbed areas.
- Silt barriers will be inspected after each rainfall and at least daily during prolonged rainfall. Required repairs will be made. Sediment deposits will be removed periodically from the upstream side of the silt barriers and will be spread and stabilized in site areas not subject to erosion. Silt barriers will be replaced, as necessary, to provide proper filtering action.
- Riprap required at culverts and down spouts will consist of fieldstone or rough unhewn quarry stone of approximately rectangular shape. Stones will be of a size as noted on the construction drawings.
- Following final grading, all graded or disturbed areas, not to be used as gravel roadways or parking areas will be spread with a minimum compacted depth of 4 inches of topsoil and seeded to provide a permanent vegetative cover.
- All areas receiving topsoil will be seeded. Seeding normally will occur between April 1 and October 1. Surface water runoff control measures (i.e., drainage ditches, berms, and culverts) will be constructed before seeding; all grading will be performed before seeding. The top layer of soil will be loosened by raking, disking, or other acceptable means before seeding. Application rates for the lime, fertilizer, seed, and mulch are presented in Table 1. The seed will be applied uniformly with a cyclone seeder, drill, cultipack seeder, or hydroseeder. Seed will not be planted if there is danger of frost

shortly after seed germination. Maximum seeding depth is 1/4 inch when using methods other than hydroseeding. Wood fiber cellulose mulch or hay mulch will be spread uniformly upon completion of the seedbed preparation, liming, fertilization, and seeding. The mulch may be anchored in place by uniformly applying an acceptable mulch binder such as Curasol or Terratac.

- If germination is unsuccessful (i.e., less than 90-percent catch) within 30 days of seeding or there is unsatisfactory growth in the next year, the area will be reseeded in accordance with seeding specifications described herein.

MAINTENANCE

Routine Maintenance

During construction, inspections will be undertaken by the contractor to assure that temporary and permanent erosion and sedimentation controls are properly installed and correctly functioning, and that additional erosion control measures are installed if needed. Such inspections will occur bi-weekly and after each significant rainfall event (1 inch or more within a 24-hour period) during construction until permanent erosion control measures have been properly installed and the site is stabilized. The contractor shall perform all inspections and documentation required by the Maine General Construction Permit.

Grassed Areas

Fertilize and lime, as necessary, according to a soil test performed by University of Maine.

EROSION CONTROL REMOVAL

Removal of temporary erosion control measures shall be the responsibility of the contractor. Erosion controls shall remain in place and maintained by the contractor until all related construction is complete and the area is stable. An area is considered stable if 90 percent cover of grass has been established or riprap or other permanent measures are in place and functioning properly.

Silt barriers shall be removed once the areas upstream are stable. The silt barriers shall be disposed of legally and properly off-site. Sediment trapped behind these controls shall be

distributed to an area undergoing final grading and graded in an aesthetic manner to conform to the topography and fertilized, seeded, and mulched in accordance with the rates listed in Table 1. The sediment trapped by these devices shall not be regraded within the existing drainage ways.

Once the trapped sediments have been removed from the temporary sedimentation devices, the disturbed areas must be loamed (if necessary), fertilized, seeded, and mulched in accordance with the rates listed in Table 1.

CONCLUSION

The proposed parking has been designed with stormwater management and erosion controls to manage surface water runoff from the site during construction and post-closure such that clean stormwater is directed to downstream water bodies. The foregoing measures and controls will help to assure that no unreasonable erosion of soil or sediment will occur as a result from construction or operations.

All proposed structures to be used within this project have been designed using engineering procedures commonly used in stormwater analyses.

To minimize erosion during and after construction, temporary and permanent erosion control measures will be implemented. Temporary measures (i.e., bark mulch sediment barriers) and permanent measures (i.e., permanent seeding and mulching) will be monitored on a regular basis. As part of the contractor's scope of work to ensure that devices are functioning properly, the contractor will perform necessary inspections and maintenance for the erosion control systems.

During construction, the Contractor will be responsible for inspecting the bark mulch sediment barriers and other components of the erosion control system on a bi-weekly basis after each rainfall and at least daily during prolonged rainfall. Any necessary repairs shall be made immediately.

ATTACHMENT 4
DEED

Know All Men by These Presents,

McGoff

to

Prince
Memorial
Library
Corp--
War

That I, Hazel M. W. McGoff of Cumberland, in the County of Cumberland and State of Maine,

in consideration of ONE DOLLAR (\$1.00) and other valuable considerations,

paid by Prince Memorial Library Corporation, a corporation duly organized and existing by law and having its principal office in said Cumberland, in said County and State,

the receipt whereof I do hereby acknowledge, do hereby give, grant, bargain, sell and convey unto the said Prince Memorial Library Corporation, its successors

~~hereby~~ and assigns forever, a certain lot or parcel of land situated in the Town of Cumberland and State of Maine, on the northwesterly side of the County Road leading from Cumberland Center to Portland, bounded and described as follows:

Beginning at an iron post on said County Road at the southeast corner of land now or formerly owned by Emily Wilson; thence S 19° 30' W by said County Road, 15.0 feet to an iron post at the north corner of land owned by the Prince Memorial Library Corporation; thence at right angles to last named course, N 70° 30' W, by said Library Corporation's land, 100.00 feet to an iron post; thence S 19° 30' W, at right angles to last named course, and by land of said Library Corporation, 280.0 feet to an iron post; thence S 50° 00' E, by land of said Library Corporation, 102.0 feet to the County Road; thence S 19° 30' W, by said County Road, 18.5 feet to a stone post at the north corner of land owned by Marjorie Chase; thence N 59° 00' W, by land of said Chase 291.7 feet, to a stone post; thence N 61° 00' W, by land of said Marjorie Chase and Medley Watson, 561.0 feet to an iron pin; thence northeasterly by land of Theodore Brown, 380.7 feet to an iron pin; thence S 49° 55' E, by land formerly owned by George D. and Ellen L. Sweetser, 419.76 feet to an iron post; thence S 70° 30' E by land now or formerly owned by Emily Wilson, 247.5 feet to point of beginning, and containing 4.4 acres, more or less.

Being the same premises conveyed to George F. McGoff by deed of Walter E. Young recorded in Cumberland County Registry of Deeds in Book 1786, Page 18; the said premises having been devised by George F. McGoff to Hazel M. W. McGoff.

The 18.5 foot strip, 102 feet long, bordering on the highway at the southerly end of the premises herein conveyed is to be used by the grantee as a right of way only and is conveyed subject to such limitation.

The 15 foot strip, 100 feet long, bordering on the highway to the northerly end of the premises herein conveyed is conveyed subject to any rights of way which may exist therein, except that the grantor for herself, her heirs and assigns does herewith release any rights of way which she may have in said strip.

It is a covenant running with the land that the premises herein conveyed are to become an addition to the premises on which the Prince Memorial Library now stands and are to be held by the Prince Memorial Library Corporation for the benefit of the Inhabitants of the Town of Cumberland, Maine.

On her and in hold the aforegranted and bargained premises with all the privileges and appurtenances thereof, to the said Prince Memorial Library Corporation, its successors

~~her~~ and assigns, to it and their use and behoof forever.

And I do covenant with the said Grantee, its ~~successors~~ and assigns, that I am lawfully seized in fee of the premises, that they are free of all incumbrances; except as aforesaid

292. that I have good right to sell and convey the same to the said Grantee to hold as aforesaid; and that I and my heirs shall and will warrant and defend the same to the said Grantee, its successors heirs and assigns forever, against the lawful claims and demands of all persons.

In Witness Whereof. I, the said Hazel M. W. McGoff, a widow,

and

~~wife of the said~~

~~jointing in this deed as Grantor and~~

relinquishing and conveying all right by descent and all other rights in the above described premises, have hereunto set my hand and seal this SIXTH day of February in the year of our Lord one thousand nine hundred and fifty-nine.

Signed, Sealed and Delivered
in presence of

[Signature]

[Signature]

State of Maine.

CUMBERLAND, ss.

February 6TH, 1959.

Personally appeared the above named Hazel M. W. McGoff

and acknowledged the foregoing instrument to be her free act and deed.

Before me,

[Signature]
Justice of the Peace
~~Notary Public~~



FEB 24 1959

REGISTRY OF DEEDS, CUMBERLAND COUNTY, MAINE

Received at 9 H 40 M A.M., and recorded in
BOOK 2459 PAGE 290 Leland R. Thayer Register

ATTACHMENT 5
ABUTTERS LIST

Abutters Within 200 Feet

Name	Address
Kane Kunst	6 Blanchard Road
Susan Gallo	272 Main Street
Jonathan Labaree	270 Main Street
Alison and David Ginsberg	268 Main Street
Jeffrey Pierce	41 Porcupine Ridge Way
Charles Burnie	34 Moose Way
Philip Chase	258 Main Street
Joseph Sanchez	255 Main Street
Rodney Booth	259 Main Street
Kelley Wells	261 Main Street
Michael Oldmixon	263 Main Street
William Bard	265 Main Street
Northern New England Telephone Operations LLC	267 Main Street
Julie Franklin	271 Main Street

ATTACHMENT 6
LIGHT CUT SHEET

VIPER L

OPTICS

STRIKE

LARGE VIPER LUMINAIRE

Cat.#

Job

Type



Approvals

SPECIFICATIONS

Intended Use:

The Beacon Viper luminaire is available in two sizes with a wide choice of different LED wattage configurations and optical distributions designed to replace HID lighting up to 1000W MH or HPS. Luminaires are suitable for wet locations.

Construction:

- Manufactured with die cast aluminum.
- Coated with a polyester finish that meets ASTM B117 corrosion test requirements and ASTM D522 cracking and loss of adhesion test requirements.
- External hardware is corrosion resistant.
- One piece optical cartridge system consisting of an LED engine, LED lamps, optics, gasket and stainless steel bezel.
- Cartridge is held together with internal brass standoffs soldered to the board so that it can be field replaced as a one piece optical system.
- Two-piece silicone and microcellular polyurethane foam gasket ensures a weather-proof seal around each individual optic.

Electrical:

- Luminaire accepts 100V through 277V, 50 Hz to 60 Hz (UNV), 347V, or 480V input.
- Power factor is $\geq .90$ at full load.
- Dimming drivers are standard, but must contact factory to request wiring leads for purpose of external dimming controls.
- Component-to-component wiring within the luminaire may carry no more than 80% of rated load and is certified by UL for use at 600VAC at 90°C or higher.
- Plug disconnects are certified by UL for use at 600 VAC, 13A or higher. 13A rating applies to primary (AC) side only.
- Fixture electrical compartment shall contain all LED driver components and shall be provided with a push-button terminal block for AC power connections.
- Optional 7-pin ANSI C136.41-2013 twist-lock photo control receptacle available. Compatible with ANSI C136.41 external wireless control devices.
- Ambient operating temperature -40°C to 40°C
- Surge protection - 20kA.
- Lifeshield™ Circuit - protects luminaire from excessive temperature. The device shall activate at a specific, factory-preset temperature, and progressively reduce power over a finite temperature range. Operation shall be smooth and undetectable to the eye. Thermal circuit is designed to "fail on", allowing the luminaire to revert to full power in the event of an interruption of its power supply, or faulty wiring connection to the drivers. The device shall be able to co-exist with other 0-10V control devices (occupancy sensors, external dimmers, etc.).

Controls/Options:

- Available with an optional passive infrared (PIR) motion sensor capable of detecting motion 360° around the luminaire. When no motion is detected for the specified time, the motion response system reduces the wattage to factory preset level, reducing the light level accordingly. When motion is detected by the PIR sensor, the luminaire returns to full wattage and full light output. Please contact Beacon Products if project requirements vary from standard configuration.
- Available with Energeni for optional set dimming, timed dimming with simple delay, or timed dimming based on time of night (see www.beaconproducts.com/products/energeni).
- In addition, Viper can be specified with SiteSync™ wireless control system for reduction in energy and maintenance costs while optimizing light quality 24/7. For more details, see ordering information or visit: www.hubbellighting.com/sitesync

Installation:

- Mounting options for horizontal arm, vertical tenon or traditional arm mounting available. Mounting hardware included.

Finish:

- IFS polyester powder-coat electrostatically applied and thermocured. IFS finish consists of a five stage pretreatment regimen with a polymer primer sealer and top coated with a thermoset super TGIC polyester powder coat finish.
- The finish meets the AAMA 2604 performance specification which includes passing a 3000 hour salt spray test for corrosion resistance and resists cracking or loss of adhesion per ASTM D522 and resists surface impacts of up to 160 inch-pounds.

Certifications/Ratings:

- DesignLights Consortium (DLC) qualified, consult DLC website for more details: <http://www.designlights.org/QPL>
- Certified to UL 1598, UL 8750, and CSA C22.2
- 3G rated for ANSI C136.31 high vibration applications with MAF mounting
- IDA approved
- This product is approved by the Florida Fish and Wildlife Conservation Commission. Separate spec available at: http://www.beaconproducts.com/products/viper_large

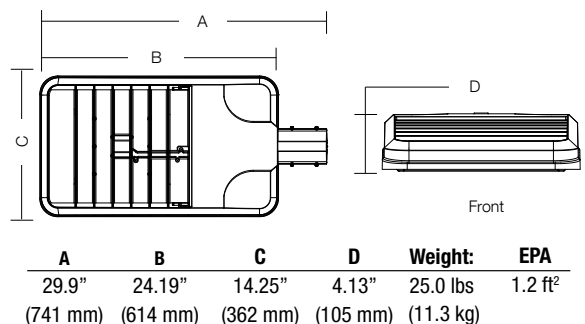
Warranty:

Five year limited warranty for more information visit: www.hubbellighting.com/resources/warranty

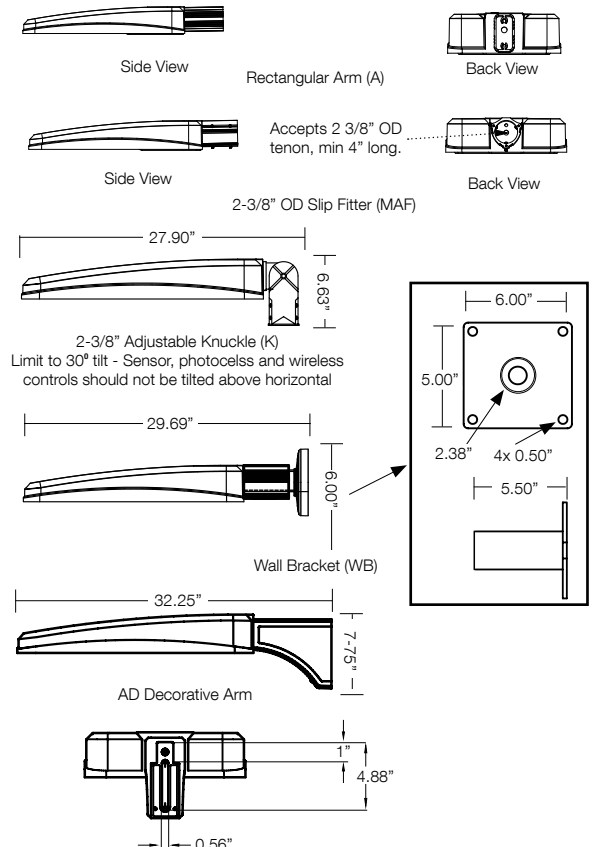
PRODUCT IMAGE(S)



DIMENSIONS



MOUNTING OPTIONS



CERTIFICATIONS/LISTINGS



*3000K and warmer CCTs only



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HUBBELL
Lighting

ORDERING INFORMATION ORDERING EXAMPLE: VPL/96L-280/4K7/4W/UNV/A/DB/7PR-TL/GENI-04/BC

VPL									
SERIES	LED ENGINE	CCT/CRI ⁷	ROTATION	VOLTAGE	COLOR	OPTIONS			
VPL Viper	64L-135 135W LED array 80L-180 180W LED array 80L-235 235W LED array 96L-220 220W LED array 96L-280 280W LED array 96L-315 315W LED array 96L-395 395W LED array	3K7 3000K, 70 CRI 4K7 4000K, 70 CRI 5K7 5000K, 70 CRI	Leave blank for no rotation L ⁵ Optic rotation left R ⁵ Optic rotation right	UNV 120-277V 120 120V 208 208V 240 240V 277 277V 347 347V 480 480V	BL Black Textured DB Dark Bronze Textured GYS Light Gray Smooth PS Platinum Silver Smooth WH White Textured CC Custom Color	F Fusing BSP Bird Spikes BC Backshield (available for FR, 2, 3, 4, 4W Optics)			

DISTRIBUTION

FR Type 1/Front Row
2 Type 2
3 Type 3
4 Type 4
4W Type 4 Wide
5QM Type 5QM
5QN Type 5QN
5R Type 5R (rectangular)
5W Type 5W (round wide)
TC Tennis Court

MOUNTING

A Rectangular Arm (formerly RA) for square or round pole
MAF Mast Arm Fitter (formerly SF2) for 2-3/8" OD horizontal arm
K Knuckle (formerly PK2) limit to 30° tilt or 2-3/8" OD horizontal arm or vertical tenon
WB Wall Bracket
AD Universal Arm for square pole
AD3 Universal Arm for 2.4"-4.1" round pole
AD4 Universal Arm for 4.2"-5.3" round pole
AD5 Universal Arm for 5.5"-5.9" round pole
AD6 Universal Arm for 6.0"-6.5" round pole

CONTROL OPTIONS

7PR 7-Pin Receptacle only (shorting cap, photo control, or wireless control provided by others)
7PR-SC 7-Pin Receptacle w/Shorting Cap
7PR-TL 7-Pin Receptacle w/Twist Lock photo control
SCP/_F^{1,2,6} Programmable Occupancy Sensor w/daylight control (120-277 volts only)
GENI-XX³ ENERGENI
SWP^{1,4} SiteSync Pre-Commission
SWPM^{1,2,4} SiteSync Pre-Commission w/ Sensor

HOUSE SIDE SHIELD ACCESSORIES

HSS/EVP-L/90-FB/XXX 90° shield front or back
HSS/EVP-L/90-LR/XXX 90° shield left or right
HSS/EVP-L/270-FB/XXX 270° shield front or back
HSS/EVP-L/270-LR/XXX 270° shield left or right
HSS/EVP-L/360/XXX Full shield

(Replace XXX with notation for desired finish color)
(Refer to page 5 for shield images)

MOUNTING ACCESSORIES

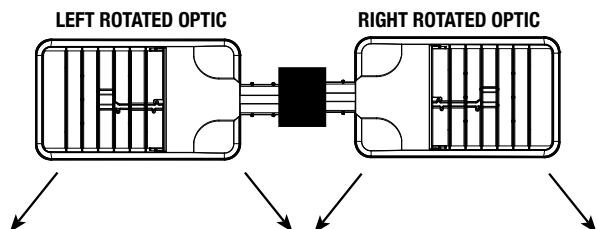
VPL-AD-RPA3 2.4"-4.1" Round Pole Adapter for AD arm
VPL-AD-RPA4 4.2"-5.3" Round Pole Adapter for AD arm
VPL-AD-RPA5 5.5"-5.9" Round Pole Adapter for AD arm
VPL-AD-RPA6 6.0"-6.5" Round Pole Adapter for AD arm

- ¹ Not available with other wireless control or sensor options
² Specify mounting height; 8 = 8' or less, 40 = 9' to 40'
³ Specify routine setting code (example GENI-04). See ENERGENI brochure and instructions for setting table and options. Not available with sensor or SiteSync options.
⁴ Specify group and zone at time of order. See www.hubbelllighting.com/sitesync for further details. Order at least one SiteSync interface accessory SWUSB or SWTAB. Each option contains SiteSync License, GUI, and Bridge Node
⁵ Only available with FR, 2, 3, 4, 4W and 5R distributions
⁶ Order at least one SCP-REMOTE per project location to program and control the occupancy sensor
⁷ This product is approved by the Florida Fish and Wildlife Conservation Commission. Separate spec available at: http://cdn.beaconproducts.com/content/products/specs/specs_files/Viper_Large_LED_turtle_spec_sheet.pdf

PRECOMMISSIONED SITESYNC ORDERING INFORMATION: When ordering a fixture with the SiteSync lighting control option, additional information will be required to complete the order. The SiteSync Commissioning Form or alternate schedule information must be completed. This form includes Project location, Group information, and Operating schedules. For more detailed information please visit www.hubbell-automation.com/products/sitesync/ or contact Hubbell Lighting tech support at (800) 345-4928.

SiteSync fixtures with Motion control (SWPM) require the mounting height of the fixture for selection of the lens.

Examples: VP-L/80L-235/4K7/3/UNV/A/DB/SWP/ SiteSync only
VP-L/80L-235/4K7/3/UNV/A/DB/SWPM-40F/ SiteSync with Motion Control



Accessories and Services (Ordered Separately)

Catalog Number	Description
SCP-REMOTE	Remote Control for SCP/_F option. Order at least one per project to program and control the occupancy sensor
SWUSB*	SiteSync interface software loaded on USB flash drive for use with owner supplied PC (Windows based only). Includes SiteSync license, software and USB radio bridge node
SWTAB*	Windows tablet and SiteSync interface software. Includes tablet with preloaded software, SiteSync license and USB radio bridge node.
SWBRG	SiteSync USB radio bridge node only. Order if a replacement is required or if an extra bridge node is requested.
SW7PR+	SiteSync 7 Pin on fixture module On/Off/Dim, Daylight Sensor 120-480VAC

* When ordering SiteSync at least one of these two interface options must be ordered per project.
+ Available as a SiteSync retrofit solution for fixtures with an existing 7pin receptacle.

Hubbell Control Solutions - Accessories (sold separately)

Catalog Number	Description	HCS System
NXOFM-1R1D-UNV	On-fixture Module (7-pin), On / Off / Dim, Daylight Sensor with HubbNET Radio and Bluetooth® Radio, 120-480VAC	NX Distributed Intelligence™
WIR-RME-L	On-fixture Module (7-pin or 5-pin), On / Off / Dim, Daylight Sensor with wiSCAPE Radio, 110-480VAC	wiSCAPE® Lighting Control

For additional information related to these accessories please visit www.hubbellcontrolsolutions.com. Options provided for use with integrated sensor, please view specification sheet ordering information table for details.

SiteSync 7-Pin Module



- SiteSync features in a new form
- Available as an accessory for new construction or retrofit applications (with existing 7-Pin receptacle)
- Does not interface with occupancy sensors



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PERFORMANCE DATA				5K (5000K nominal, 70 CRI)					4K (4000K nominal, 70 CRI)					3K (3000K nominal, 70 CRI)				
# LED'S	DRIVE CURRENT (MILLIAMPS)	SYSTEM WATTS	DISTRIBUTION TYPE	LUMENS	LPW ¹	B	U	G	LUMENS	LPW ¹	B	U	G	LUMENS	LPW ¹	B	U	G
64	625 mA	135W	1A	18220	132	2	0	2	18783	137	2	0	2	16341	119	2	0	2
			2	17228	125	2	0	2	17761	129	2	0	2	15452	112	2	0	2
			3	17257	125	2	0	3	17791	129	2	0	3	15478	112	2	0	3
			4	16864	123	1	0	4	17386	126	1	0	4	15125	110	1	0	3
			4W	16648	112	2	0	4	17163	115	2	0	4	14931	100	2	0	4
			5QM	17259	125	4	0	2	17792	129	4	0	2	15479	112	4	0	2
			5QN	18023	131	4	0	0	18580	135	4	0	0	16165	117	4	0	0
			5R	17410	127	4	0	4	17948	130	4	0	4	15615	113	4	0	4
			5W	16498	120	4	0	2	17009	124	4	0	3	14797	108	4	0	2
			TC	15925	110	2	1	2	16417	113	2	1	2	14283	98	1	1	2
80	700 mA	180W	1A	23230	128	2	0	2	23948	132	2	0	2	20835	115	2	0	2
			2	21965	121	3	0	3	22645	125	3	0	3	19701	109	2	0	3
			3	22003	121	2	0	4	22683	125	3	0	4	19734	109	2	0	4
			4	21502	119	2	0	4	22167	122	2	0	4	19285	106	2	0	4
			4W	20810	112	2	0	4	21627	116	2	0	4	18664	100	2	0	4
			5QM	22005	121	4	0	2	22686	125	4	0	2	19736	109	4	0	2
			5QN	22979	127	4	0	1	23689	131	4	0	1	20610	114	4	0	0
			5R	22197	122	4	0	4	22884	126	4	0	4	19909	110	4	0	4
			5W	21035	116	5	0	3	21686	120	5	0	3	18867	104	4	0	3
			TC	19906	110	2	1	2	20522	113	2	1	2	17854	98	2	1	2
80	875 mA	235W	1A	27849	121	2	0	2	28711	125	2	0	2	24978	108	2	0	2
			2	26334	114	3	0	3	27148	118	3	0	4	23619	102	3	0	3
			3	26378	114	3	0	4	27194	118	3	0	4	23659	103	3	0	4
			4	25777	112	2	0	4	26575	115	2	0	5	23120	100	2	0	4
			4W	25109	106	2	0	5	25886	109	2	0	5	22521	95	2	0	5
			5QM	26381	114	4	0	2	27196	118	4	0	2	23661	103	4	0	2
			5QN	27548	119	5	0	1	28400	123	5	0	1	24708	107	5	0	1
			5R	26611	115	5	0	5	27434	119	5	0	5	23868	104	4	0	4
			5W	25218	109	5	0	3	25998	113	5	0	3	22619	98	5	0	3
			TC	23864	103	2	1	2	24602	107	2	1	2	21404	93	2	1	2
96	700 mA	220W	1A	27876	128	2	0	2	28738	132	2	0	2	25002	115	2	0	2
			2	26359	121	3	0	3	27174	125	3	0	4	23641	109	3	0	3
			3	26403	121	3	0	4	27220	125	3	0	4	23681	109	3	0	4
			4	25802	119	2	0	4	26600	122	2	0	5	23142	106	2	0	4
			4W	24651	113	3	0	5	25413	117	3	0	5	22109	102	2	0	4
			5QM	26406	121	4	0	2	27222	125	4	0	2	23684	109	4	0	2
			5QN	27575	127	5	0	1	28427	131	5	0	1	24732	114	5	0	1
			5R	26637	122	5	0	5	27460	126	5	0	5	23891	110	4	0	4
			5W	25242	116	5	0	3	26023	120	5	0	3	22640	104	5	0	3
			TC	23887	110	2	1	2	24626	113	2	1	2	21424	98	2	1	2
96	875 mA	280W	1A	33419	121	3	0	2	34453	125	3	0	2	29974	108	2	0	2
			2	31600	114	3	0	4	32577	118	3	0	4	28342	102	3	0	4
			3	31654	114	3	0	5	32633	118	3	0	5	28390	103	3	0	4
			4	30933	112	2	0	5	31889	115	2	0	5	27744	100	2	0	5
			4W	30131	106	3	0	5	31063	109	3	0	5	27025	95	3	0	5
			5QM	31657	114	5	0	3	32636	118	5	0	3	28393	103	4	0	2
			5QN	33058	119	5	0	1	34080	123	5	0	1	29650	101	5	0	1
			5R	31933	115	5	0	5	32921	119	5	0	5	28641	104	5	0	5
			5W	30262	109	5	0	4	31198	113	5	0	4	27142	98	5	0	3
			TC	28642	104	2	1	3	29528	107	2	1	3	25690	93	2	1	3
96	1000mA	315W ²	1A	35666	113	3	0	2	36769	117	3	0	2	31989	101	2	0	2
			2	33725	107	3	0	4	34768	110	3	0	4	30248	96	3	0	4
			3	33782	107	3	0	5	34827	110	3	0	5	30299	96	3	0	4
			4	33012	105	2	0	5	34033	108	2	0	5	29609	94	2	0	5
			4W	32158	106	3	0	5	33153	109	3	0	5	28842	95	3	0	5
			5QM	33785	107	5	0	3	34830	110	5	0	3	30302	96	5	0	2
			5QN	35280	112	5	0	1	36371	115	5	0	1	31643	100	5	0	1
			5R	34080	108	5	0	5	35134	111	5	0	5	30567	97	5	0	5
			5W	32302	102	5	0	4	33301	106	5	0	4	28972	92	5	0	4
			TC	30568	97	2	1	3	31513	100	3	1	3	27416	87	2	1	3
96	1225mA	395W ²	1A	39569	101	3	0	4	43125	110	3	0	3	37518	96	3	0	2
			2	39569	101	3	0	4	40793	104	3	0	4	35490	91	3	0	4
			3	39619	101	3	0	5	40845	104	3	0	5	35535	91	3	0	5
			4	38723	98	3	0	5	39921	101	3	0	5	34731	88	2	0	5
			4W	37720	106	3	0	5	38887	109	3	0	5	33831	95	3	0	5
			5QM	39623	101	5	0	3	40848	104	5	0	3	35538	90	5	0	3
			5QN	41394	105	5	0	1	42675	109	5	0	1	37127	95	5	0	1
			5R	39969	102	5	0	5	41205	105	5	0	5	35848	91	5	0	5
			5W	37877	97	5	0	4	39048	100	5	0	4	33986	87	5	0	4
			TC	35850	90	3	1	3	36959	93	3	1	3	32154	81	3	1	3

¹ Lumen values are from photometric tests performed in accordance with IESNA LM-79-08. Data is considered to be representative of the configurations shown. Actual performance may differ as a result of end-user environment and application.

² 315W and 395W 3000K versions are not DLC QPL listed. Reference highlighted cells in table.



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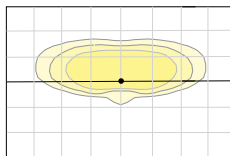
Due to our continued efforts to improve our products, product specifications are subject to change without notice.

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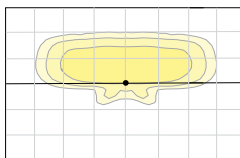


PHOTOMETRICS

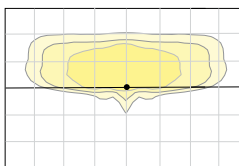
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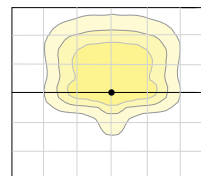
Type 2



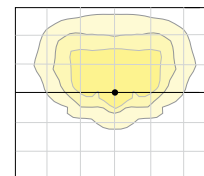
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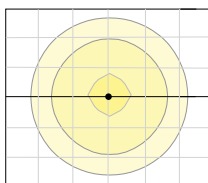
Type 4



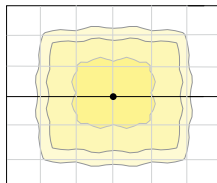
Type 4W



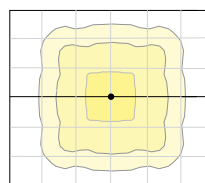
Type 5W



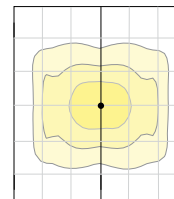
Type 5QN



Type 5QM



Type 5R



ELECTRICAL DATA

# OF LEDS	NUMBER OF DRIVERS	DRIVE CURRENT (mA)	INPUT VOLTAGE (V)	SYSTEM POWER (w)	CURRENT (Amps)
64	1	625 mA	120	135	1.4
			277		0.6
			347		0.5
			480		0.3
80	2	700 mA	120	180	1.8
			277		0.8
			347		0.6
			480		0.5
80	2	875 mA	120	235	2.4
			277		1.0
			347		0.8
			480		0.6
96	2	700 mA	120	220	2.2
			277		1.0
			347		0.8
			480		0.6
96	2	875 mA	120	280	2.8
			277		1.2
			347		1.0
			480		0.7
96	2	1000 mA	120	315	3.2
			277		1.4
			347		1.1
			480		0.8
96	2	1225 mA	120	395	4.0
			277		1.7
			347		1.4
			480		1.0

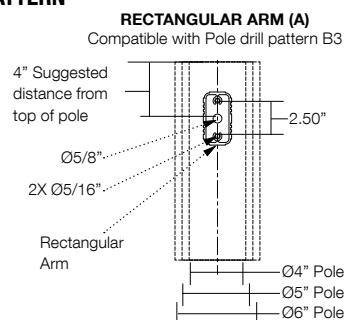
PROJECTED LUMEN MAINTENANCE

AMBIENT TEMP.	0	25,000	50,000	TM-21-11 60,000	100,000	Calculated L70 (HOURS)
25°C / 77°C	1	0.98	0.97	0.97	0.96	>377,000

¹ Projected per IESNA TM-21-11

Data references the extrapolated performance projections for the 700mA base model in a 25°C ambient, based on 10,000 hours of LED testing per IESNA LM-80-08.

DRILL PATTERN



EPA

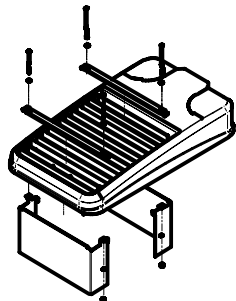
Config.	EPA	Config.	EPA
1	1.2	3 @ 120°	3.0
2 @ 90°	1.9	3 @ 90°	3.1
2 @ 180°	2.4	4 @ 90°	3.8

TENON TOP POLE BRACKET ACCESSORIES (Order Separately)

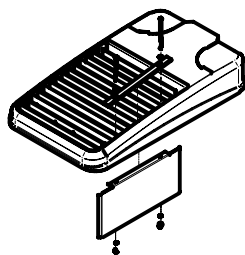
(2 3/8" OD tenon)

Catalog Number	Description
SETAVP-XX	Square tenon adapter (4 at 90°) for A - Rectangular Arm mounting option only
RETAVP-XX	Round tenon adapter (4 at 90°) for A - Rectangular Arm mounting option only
TETAVP-XX	Hexagonal tenon adapter (4 at 90°) for A - Rectangular Arm mounting option only
SETA2XX	Square tenon adapter (4 at 90°) for AD - Universal Arm mounting option only
RETA2XX	Round tenon adapter (4 at 90°) for AD3 - Universal Arm mounting option only
TETA2XX	Hexagonal tenon adapter (3 at 120°) for AD - Universal Arm mounting option only

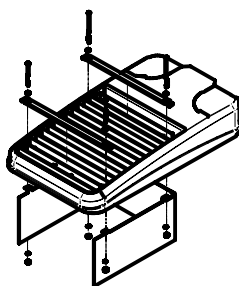
HOUSE SIDE SHIELD FIELD INSTALL ACCESSORIES



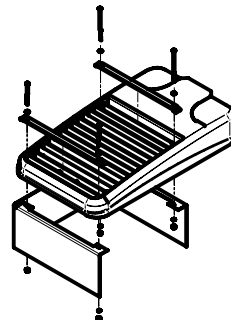
HSS/EVP-L/90-FB/XXX
90° shield front or back
(2 shields shown)



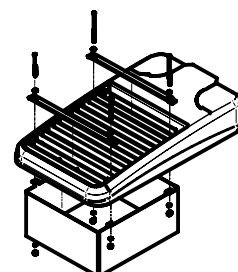
HSS/EVP-L/90-LR/XXX
90° shield left or right
(1 shield shown in left orientation)



HSS/EVP-L/270-FB/XXX
270° shield front or back
(1 shield shown in back orientation)

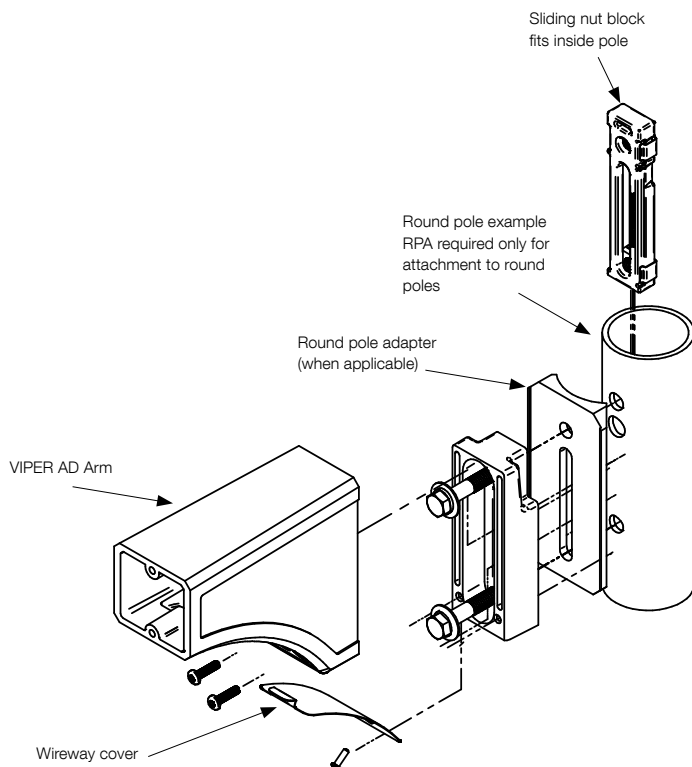


HSS/EVP-L/270-LR/XXX
270° shield left or right
(1 shield shown in right orientation)



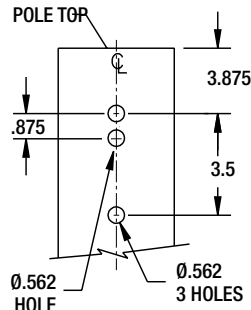
HSS/EVP-L/360/XXX
Full shield
(1 shield shown)

AD ARM MOUNTING INSTRUCTIONS

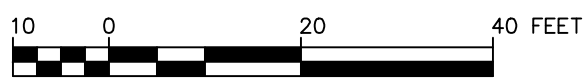
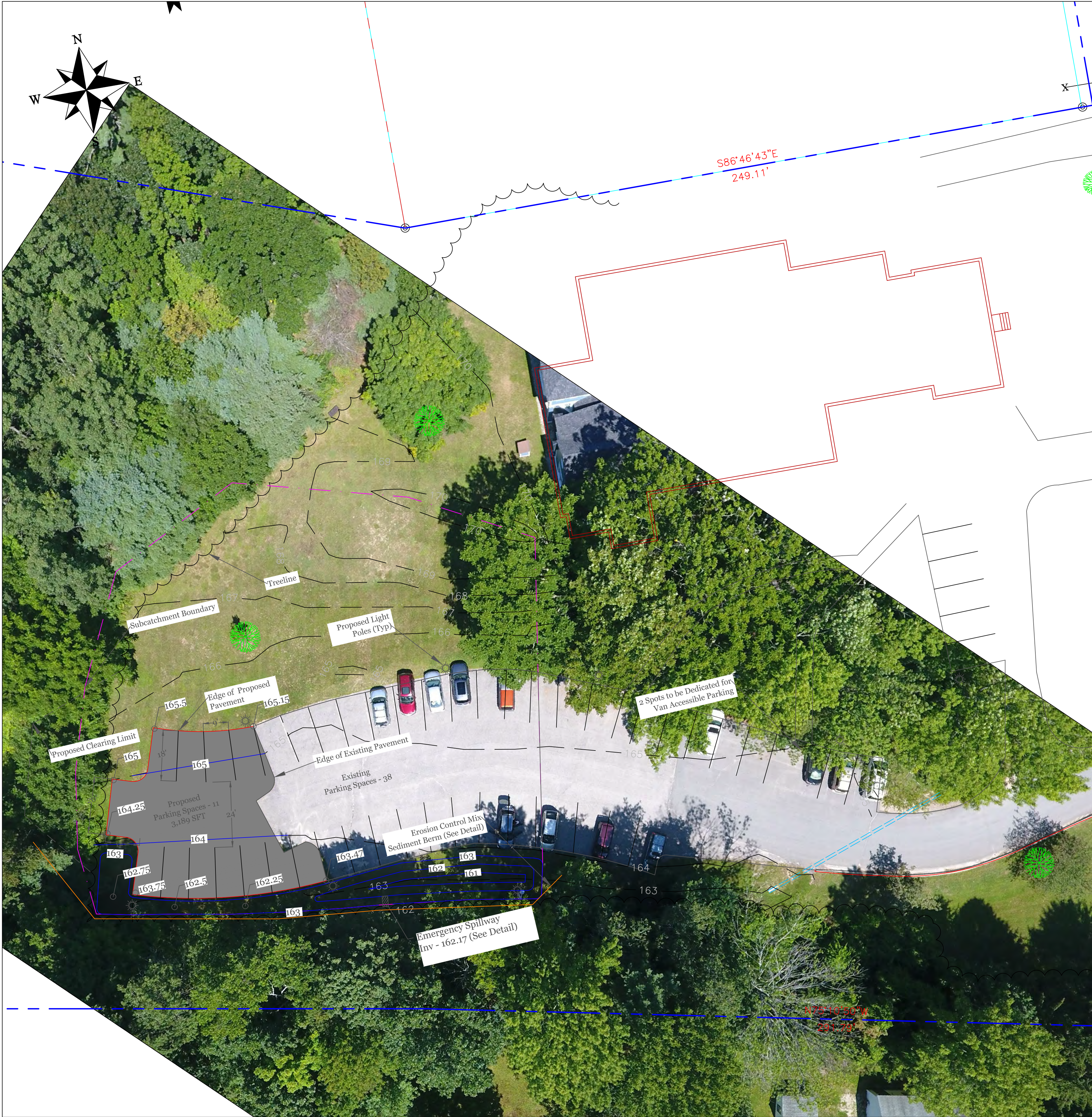


DECORATIVE ARM (AD)

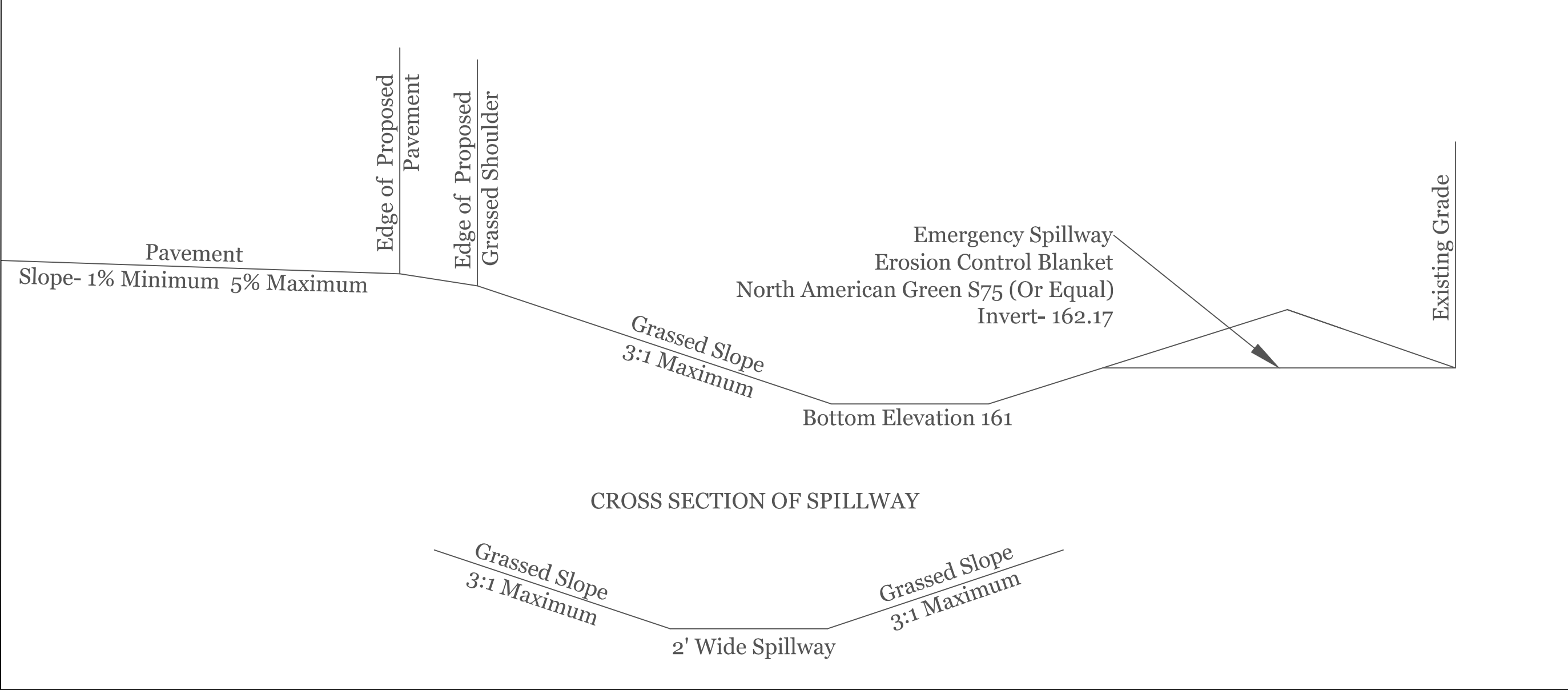
Compatible with pole drill pattern S2



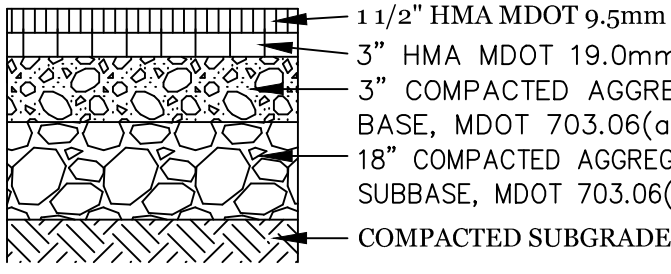
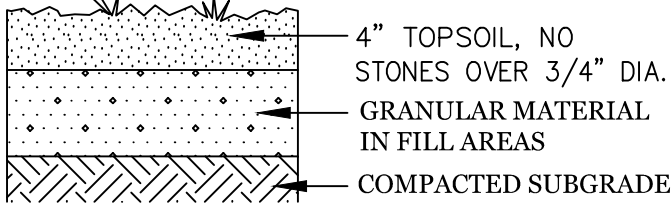
ATTACHMENT 7
PLAN SET



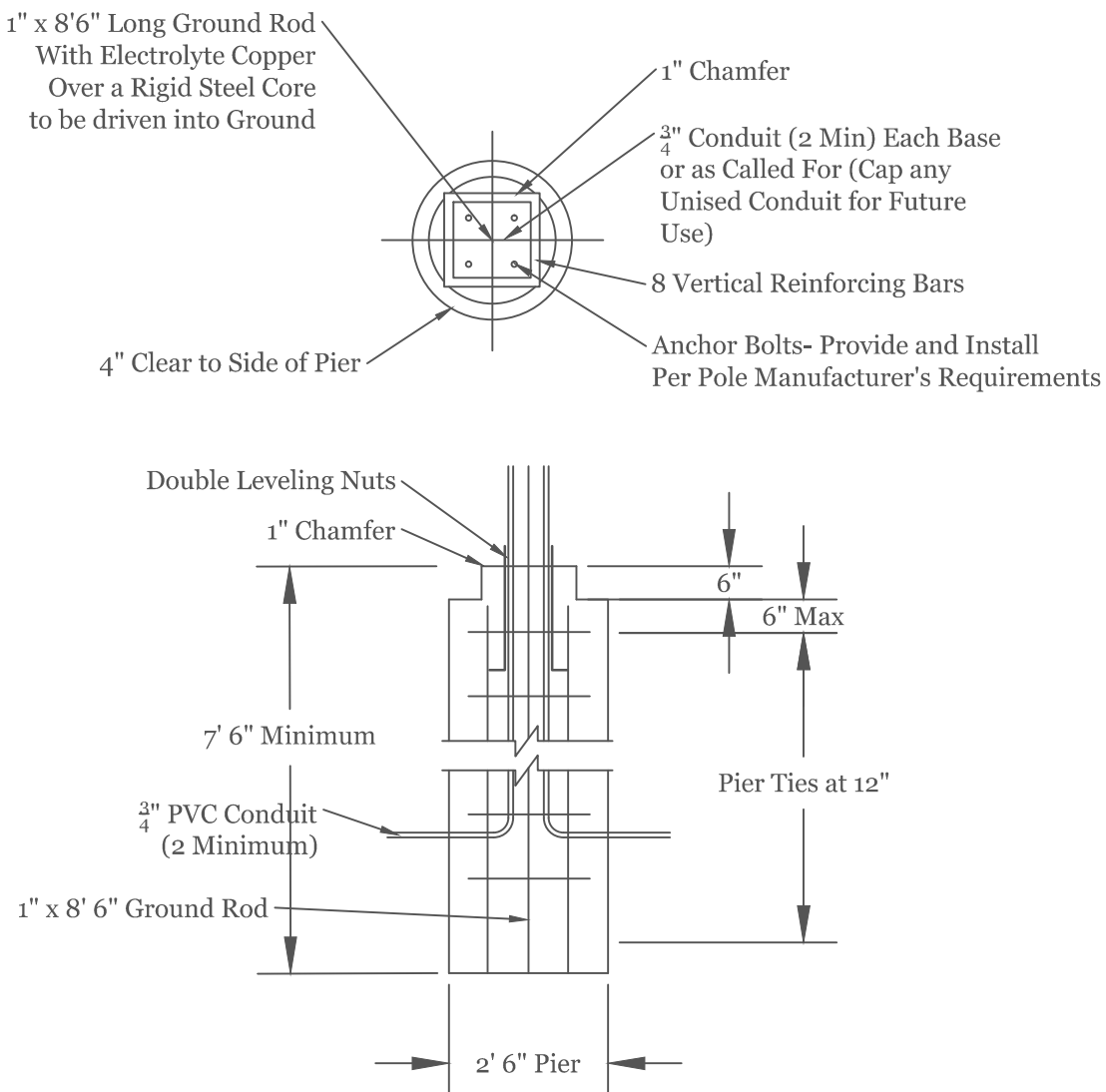
- Notes:
1. Parking lot expansion shall be a minimum of 15' from property line
 2. Existing lighting will be upgraded to match proposed fixtures.
 3. Lighting will be programmed to turn on and off an hour before and after start and end of business respectively.



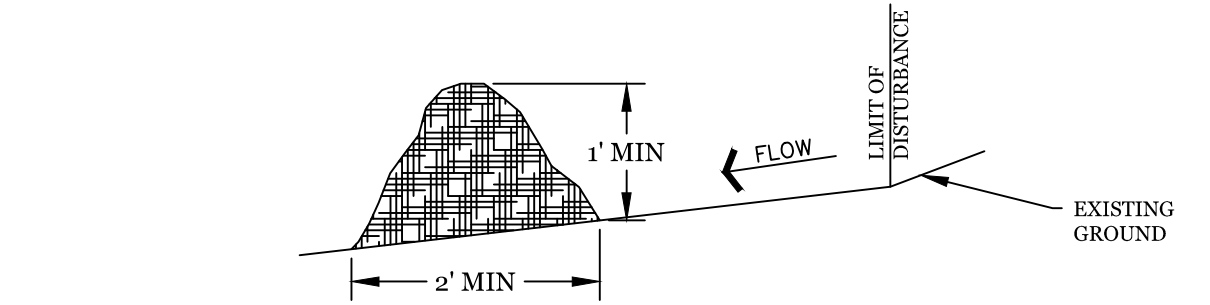
DETENTION POND DETAIL (NTS)

CONSTRUCTION	USE
	<u>BITUMINOUS</u>
	<u>GRASS</u> ALL DISTURBED AREAS

SURFACES (NTS)



LIGHT POLE BASE (NTS)



- NOTES:
1. EROSION CONTROL MIX CAN BE MANUFACTURED ON OR OFF THE SITE. IT MUST CONSIST PRIMARILY OF ORGANIC MATERIAL SEPARATED AT THE POINT OF GENERATION, AND MAY INCLUDE: SHREDDED BARK, STUMP GRINDINGS, COMPOSTED BARK, OR FLUME GRIT AND FRAGMENTED WOOD GENERATED FROM WATER-FLUME LOG HANDLING SYSTEMS.
WOOD CHIPS, GROUND CONSTRUCTION DEBRIS, REPROCESSED WOOD PRODUCTS OR BARK CHIPS WILL NOT BE ACCEPTABLE AS THE ORGANIC COMPONENT OF THE MIX.
EROSION CONTROL MIX SHALL CONTAIN A WELL-GRADED MIXTURE OF PARTICLE SIZES AND MAY CONTAIN ROCKS LESS THAN 4" IN DIAMETER.
EROSION CONTROL MIX MUST BE FREE OF REFUSE, PHYSICAL CONTAMINANTS, AND MATERIAL TOXIC TO PLANT GROWTH.
THE MIX COMPOSITION SHALL MEET THE FOLLOWING STANDARDS:
A. ORGANIC MATERIAL: BETWEEN 20% - 100% (DRY WEIGHT BASIS)
B. PARTICLE SIZE: BY WEIGHT, 100% PASSING 6" SCREEN, 70-85% PASSING 0.75" SCREEN
C. THE ORGANIC PORTION NEEDS TO BE FIBROUS AND ELONGATED
D. LARGE PORTIONS OF SILTS, CLAYS OR FINE SANDS ARE NOT ACCEPTABLE IN THE MIX.
E. SOLUBLE SALTS CONTENT SHALL BE LESS THAN 4.0 MMHOS/CM.
F. PH: 5.0 - 8.0
 2. ON SLOPES LESS THAN 5% OR AT THE BOTTOM OF SLOPES 2:1 OR LESS UP TO 20 FEET LONG, THE BARRIER MUST CONFORM TO THE ABOVE DIMENSIONS. ON THE LONGER OR STEEPER SLOPES, THE BARRIER SHOULD BE WIDER TO ACCOMMODATE THE ADDITIONAL FLOW.
 3. THE BARRIER MUST BE PLACED ALONG A RELATIVELY LEVEL ELEVATION. IT MAY BE NECESSARY TO CUT TALL GRASSES OR WOODY VEGETATION TO AVOID CREATING VOIDS AND BRIDGES THAT WOULD ENABLE FINES TO WASH UNDER THE BARRIER THROUGH THE GRASS BLADES OR PLANT STEMS.
 4. LOCATIONS WHERE OTHER BMP'S SHOULD BE USED:
A. AT LOW POINTS OF CONCENTRATED FLOW
B. BELOW CULVERT OUTLET APRONS
C. WHERE A PREVIOUS STAND-ALONE EROSION CONTROL MIX APPLICATION HAS FAILED
D. AT THE BOTTOM OF STEEP PERIMETER SLOPES THAT ARE MORE THAN 50 FEET FROM TOP TO BOTTOM (LARGE UPGRADED WATERSHED)
E. AROUND CATCH BASINS AND CLOSED STORM DRAIN SYSTEMS.
 5. THE EROSION CONTROL MIX BARRIERS SHOULD BE INSPECTED REGULARLY AND AFTER EACH LARGE RAINFALL. REPAIR ALL DAMAGED SECTIONS OF BERM IMMEDIATELY BY REPLACING OR ADDING ADDITIONAL MATERIAL PLACED ON THE BERM TO THE DESIRED HEIGHT AND WIDTH.
 6. IT MAY BE NECESSARY TO REINFORCE THE BARRIER WITH SILT FENCE OR STONE CHECK DAMS IF THERE ARE SIGNS OF UNDERCUTTING OR THE IMPOUNDMENT OF LARGE VOLUMES OF WATER.
 7. SEDIMENT DEPOSITS SHOULD BE REMOVED WHEN THEY REACH APPROXIMATELY ONE-HALF THE HEIGHT OF THE BARRIER.
 8. REPLACE SECTIONS OF BERM THAT DECOMPOSE, BECOME CLOGGED WITH SEDIMENT OR OTHERWISE BECOME INEFFECTIVE. THE BARRIER SHOULD BE RESHAPED AS NEEDED.
 9. EROSION CONTROL MIX BARRIERS CAN BE LEFT IN PLACE AFTER CONSTRUCTION. ANY SEDIMENT DEPOSITS REMAINING IN PLACE AFTER BARRIER IS NO LONGER REQUIRED SHOULD BE SPREAD TO CONFORM TO THE EXISTING GRADE AND BE SEEDED AND MULCHED. WOODY VEGETATION CAN BE PLANTED INTO THE BARRIERS, OR THEY CAN BE OVER-SEEDED WITH LEGUMES. IF THE BARRIER NEEDS TO BE REMOVED, IT CAN BE SPREAD OUT INTO THE LANDSCAPE.

EROSION CONTROL MIX SEDIMENT BERM (NTS)

REVISIONS


Original Submission - 8/28/2018 (CEB)

Grange Engineering Group, LLC
8 Grange Hall Road
New Gloucester, Maine
04260

(207) 712-6990
charlie@grangeng.com

C-2

SITE PLAN



SURVEYOR'S NOTES

- 1 THIS SURVEY PLAN IS ONLY VALID IF AUTHENTIC EMBOSSED SEAL AND SIGNATURE OF CERTIFYING PROFESSIONAL APPEAR ON THE FACE OF THIS SURVEY PLAN.
- 2 REFERENCE IS MADE TO THE CONTRACTUAL AGREEMENT BETWEEN THE PROFESSIONAL LAND SURVEYOR AND THE CLIENT.
- 3 THIS SURVEY PLAN IS SUBJECT TO POSSIBLE REVISION UPON RECEIPT OF A CERTIFIED TITLE OPINION.
- 4 ON THE BASIS OF MY KNOWLEDGE, INFORMATION AND BELIEF I CERTIFY EXCLUSIVELY TO THE CLIENT THAT THIS SURVEY PLAN, MADE TO THE NORMAL STANDARD OF CARE, SUBSTANTIALLY CONFORMS TO THE MAINE BOARD OF LICENSURE FOR LAND SURVEYOR STANDARDS.
- 5 NO CERTIFICATION IS MADE TO THE EXISTENCE OR NONEXISTENCE OF HAZARDOUS SUBSTANCES, ENVIRONMENTALLY SENSITIVE AREAS, UNDERGROUND UTILITIES, UNDERGROUND STRUCTURES, ZONING REGULATIONS OR REAL ESTATE TITLE.
- 6 DIG SAFE MUST BE CONTACTED AND CONTRACTOR SHALL FIELD VERIFY LOCATIONS AND DIMENSIONS OF ALL UTILITIES PRIOR TO EXCAVATION.
- 7 THE SOURCE OF BEARINGS FOR THIS LAND SURVEY MAINE STATE GRID PLANE N.A.D. 1983 WEST ZONE, ELEVATIONS N.G.V.D. 1929 MEAN SEA LEVEL.
- 8 THE PROPERTY IS DEPICTED ON THE TOWN ASSESSOR'S MAP U10 AS LOT 17.

FOUND HELD
5"x9" STONE MON
4" ABOVE GRADE

270 MAIN STREET
MAP U11 LOT 42
JONATHAN M. LABAREE
BOOK 18888 PAGE 246

268 MAIN STREET
MAP U11 LOT 41
DAVID GINSBERG
BOOK 30527 PAGE 235

PRINCE MEMORIAL LIBRARY
266 MAIN STREET
MAP U10 LOT 17
BOOK 4543 PAGE 5
BOOK 2459 PAGE 290
BOOK 1096 PAGE 144

LOT AREA
5.46 Acres

FOUND HELD
1-1/2" IRON PIPE
2" BELOW GRADE

FOUND HELD
1-1/2" IRON PIPE
0" ABOVE GRADE

FOUND
HELLED FOR LINE
1" IRON PIPE
3" BELOW GRADE

267 MAIN STREET
MAP U11 LOT 40
NORTHERN N.E. L.L. L.L. L.L.
BOOK 25944 PAGE 94
BOOK 2514 PAGE 94

265 MAIN STREET
MAP U11 LOT 37
WILLIAM J. BAKER
BOOK 30782 PAGE 34

263 MAIN STREET
MAP U11 LOT 38
MICHAEL J. BAKER
BOOK 31651 PAGE 151

261 MAIN STREET
MAP U11 LOT 36
KELLEY REYNOLDS
BOOK 31651 PAGE 228

MAP U11 LOT 43A
NOW OR FORMERLY
KANE KUNST
BOOK 32316 PAGE 112

FOUND
5/8" IRON REBAR
3" ABOVE GRADE
PLS 2390

MAP U12 LOT 2A
NOW OR FORMERLY
JEFFREY B. PIERCE
BOOK 31692 PAGE 187

FOUND HELD
2-1/2" IRON PIPE
10" ABOVE GRADE
STONES AT BASE

LEGEND

EXISTING	DESCRIPTION	PROPOSED
	PROPERTY LINE	
	ADJOINER LINE	
	EASEMENT	
	MONUMENT	
	IRON PIPE	
	5/8" IRON REBAR	
	BUILDING	
	SIGN	
	EDGE PAVEMENT	
	CURB LINE	
	TREE LINE	
	CONTOURS	
	GAS	
	WATER	
	SEWER	
	STORM DRAIN	
	ELECTRIC LINES	
	MAIL BOX	
	GATE VALVE	
	LIGHT POLE	
	UTILITY POLE	
	HYDRANT	
	CATCH BASIN	
	MAN HOLE	
	CULVERT	
	FENCE	
	CONIFEROUS TREE	
	DECIDUOUS TREE	
	CRAT. ELEVATION	

MOOSE WAY

34 MOOSE WAY
MAP U10 LOT 16
CHARLES BURNIE
BOOK 31330 PAGE 50

FOUND HELD
1-1/4" IRON PIPE
12" ABOVE GRADE
STONES AT BASE

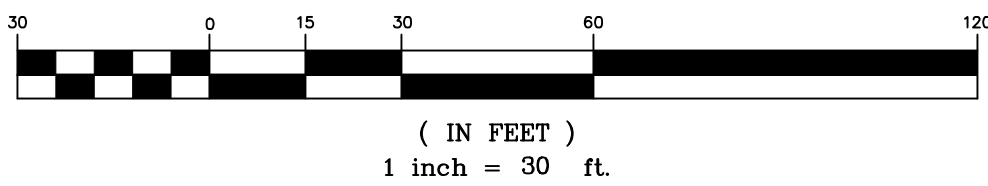
FOUND HELD
3"x9" STONE
5" ABOVE GRADE

258 MAIN STREET
MAP U10 LOT 15
PHILIP A. CHASE
BOOK 15122 PAGE 34

FOUND HELD
6"x10" STONE
2" ABOVE GRADE

C.C.C.O. VOLUME 17 PAGES 320-323
60 FEET WIDE
HELD FOUND
6"x8" STONE
2" BELOW GRADE
POINTED OUT BY PHILIP A. CHASE JUNE 26 2017.
AS THE 1907 COUNTY RELOCATION
STONE BURIED 30 YEARS EARLIER

GRAPHIC SCALE



		Scale: 1" = 30'
		Project No: 201818
		AutoCAD Release: 2016
		Drawn By: DB
		Field Date: 7-3-2018
		Plan Date: 7-12-2018
No.	Revision	Date
THIS PLAN IS PROVIDED EXCLUSIVELY FOR THE CLIENT STATED HEREON. ANY USE OR ALTERATION OF THIS PLAN BY OTHERS SHALL BE AT THE USER'S SOLE RISK AND WITHOUT LIABILITY TO BOUNDARY POINTS, LLC.		
EXISTING CONDITIONS PLAN FOR TOWN OF CUMBERLAND OF 266 MAIN STREET CUMBERLAND MAINE		C-1
Boundary Points PROFESSIONAL LAND SURVEYING, LLC P.O. BOX 175 CUMBERLAND MAINE 04021-0175 207-854-1015		© 2017 BOUNDARY POINTS